

**Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382**

Draft

**AIR QUALITY PERMIT
Issued under 401 KAR 52:020**

Permittee Name: Arkema, Inc.
Mailing Address: 4444 Industrial Parkway, P.O. BOX 187
Calvert City, KY 42029

Source Name: Same as above
Mailing Address: Same as above

Source Location: KY Highway 1523, ~1 mile west of intersection
of KY-1523 and KY-95

Permit Number: V-03-015 Revision 1
Source A. I. #: 2918
Activity #: APE20060001, APE20060004
Review Type: Title V/Synthetic Minor
Source ID #: 21-157-00007

Regional Office: Paducah Regional Office
130 Eagle Nest Drive
Paducah, KY 42003-9435
(270)898-8468

County: Marshall

Application
Complete Date: 3/12/2006
Issuance Date: 5/19/2006
Revision Date:
Expiration Date: 5/19/2011

**John S. Lyons, Director
Division for Air Quality**

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	Permit type	Log or Activity#	Complete Date	Issuance Date	Summary of Action
V-03-015	Initial Issuance	APE20040007	2/13/1999	5/19/2006	Source wide Operation
V-03-015	Revision 1	APE20060001	3/12/2006	---	Kynar Plant Global Expansion
		APE20060004	6/22/2006	---	Spray Booth Replacement

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SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Boiler Area**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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90**Boiler #1**

Description: Indirect Heat Exchanger, Babcock and Wilcox FJ-18 No. 40

Primary Fuel: Natural gas

Backup Fuel: No. 2 fuel oil

Rated Capacity: 60 mmBtu/hr

Commenced: 1953

01**Natural Gas Combustion**

Controls: None

02**No. 2 Fuel Oil Combustion**

Less than 0.5 wt% sulfur

Controls: None

APPLICABLE REGULATIONS:

401 KAR 50:055, General Compliance Requirements.

401 KAR 61:015, Existing Indirect Heat Exchangers Constructed prior to April 9, 1972.

40 CFR 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Boiler #1 is in the existing, large, liquid fuel subcategory as defined in 63.7575. Pursuant to 40 CFR 63.7506(b), it is subject only to the initial notification requirements of 40 CFR 63.9(b). It is not subject to the emission limits, work practice standards, performance testing, monitoring, site-specific monitoring plans (SSMP), record keeping and reporting requirements of 40 CFR 63 Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A. The initial notification requirements have been fulfilled.

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart D through Dc. Rules do not apply because emission point was commenced before the applicability dates.

1. Operating Limitations:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Boiler Area****2. Emission Limitations:**

- a. Mass Emission Limit pursuant to 401 KAR 61:015 Section 4(1) in a Priority I region for PM, and based on a total source heat input capacity of 120 mmBtu/hr:

Particulate emissions shall not exceed 0.31 pounds per million British thermal unit (mmBtu) actual heat input, based on the following equation:

$$0.9634 \times [mmBtu/hour \text{ heat input as determined by 401 KAR } 61:015(3)(1)]^{-0.2356}$$

Compliance Demonstration Method:

While burning only natural gas or No. 2 fuel oil the permittee shall be deemed to be in compliance with the applicable emission standards. See **5. Specific Record Keeping Requirements** below.

- b. Visible emissions shall not exceed 20% opacity on a 6-minute average basis, except as follows (based on Priority I region for PM). [401 KAR 61:015 Section 4(2)]
- i. The opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations. [401 KAR 61:015 Section 4(2)(c)]
 - ii. The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

- While burning only natural gas the permittee shall be deemed to be in compliance with the applicable emission standards. See **5. Specific Record Keeping Requirements** below.
 - When burning No. 2 fuel oil, see **3. Testing requirements**, and **5. Specific Record Keeping Requirements** below.
- c. Sulfur Dioxide Emission Limit pursuant to 401 KAR 61:015 Section 5(1) in a Class V region for sulfur dioxide, and based on a total source heat input capacity of 120 mmBtu/hr:

Sulfur dioxide emissions shall not exceed 4.4 pounds per mmBtu actual heat input, averaged over a 24-hour period, based on the following equation:

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Boiler Area**

$$8.0189 \times [\text{mmBtu/hour heat input as determined by 401 KAR}]^{0.1260}$$

Compliance Demonstration Method:

While burning natural gas the permittee shall be deemed to be in compliance with the applicable emission standards. While burning No. 2 fuel oil with no greater than 0.5 wt% sulfur content, the boiler is deemed to be in compliance with the applicable emission standards. See **5. Specific Record Keeping Requirements** below.

3. Testing Requirements:

When burning No. 2 fuel oil, the permittee shall perform a qualitative visible observation of the opacity of emissions on a weekly basis and maintain a log of the observation. If visible emissions are seen, then the opacity shall be determined by EPA Reference Method 9. If Method 9 indicates emissions in excess of the standard, then an inspection shall be initiated for any necessary repairs. If a Method 9 test cannot be performed, the reason for not performing the test shall be documented.

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

- a. When burning No. 2 fuel oil, weekly records of the visual observation of opacity of emissions and the opacity determined by Reference Method 9, if any were taken, and repairs that were made due to any opacity reading which exceeded the standard.
- b. Annual records of the amount of fuel burned in the Boiler No. 1.
- c. Annual (calendar year) records of the types of fuel burned.
- d. Fuel supplier certifications (including records of sulfur content) for all fuel oil burned.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Boiler Area**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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91**Boiler #2**

Description: Indirect Heat Exchanger, Babcock and Wilcox FJ-18 No. 40

Primary Fuel: Natural gas

Backup Fuel: No. 2 fuel oil

Rated Capacity: 60 mmBtu/hr

Commenced: 1953

01**Natural Gas Combustion**

Controls: None

02**No. 2 Fuel Oil Combustion**

Less than 0.5 wt% sulfur

Controls: None

APPLICABLE REGULATIONS:

401 KAR 50:055, General Compliance Requirements.

401 KAR 61:015, Existing Indirect Heat Exchangers Constructed Prior to April 9, 1972.

40 CFR 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Boiler #2 is in the existing, large, liquid fuel subcategory as defined in 63.7575. Pursuant to 40 CFR 63.7506(b), it is subject only to the initial notification requirements of 40 CFR 63.9(b). It is not subject to the emission limits, work practice standards, performance testing, monitoring, site-specific monitoring plans (SSMP), record keeping and reporting requirements of 40 CFR 63 Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A. The initial notification requirements have been fulfilled.

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart D through Dc. Rules do not apply because emission point was commenced before the applicability dates.

1. Operating Limitations:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Boiler Area****2. Emission Limitations:**

- a. Mass Emission Limit pursuant to 401 KAR 61:015 Section 4(1) in a Priority I region for PM, and based on a total source heat input capacity of 120 mmBtu/hr:

Particulate emissions shall not exceed 0.31 pounds per mmBtu actual heat input, based on the following equation:

$$0.9634 \times [\text{mmBtu/ hour heat input as determined by 401 KAR 61:015(3)(1)}]^{-0.2356}$$

Compliance Demonstration Method:

While burning only natural gas or No. 2 fuel oil the permittee shall be deemed to be in compliance with the applicable emission standards. See **5. Specific Record Keeping Requirements** below.

- b. Visible emissions shall not exceed 20% opacity on a 6-minute average basis, except as follows (based on Priority I region for PM). [401 KAR 61:015 Section 4(2)]
- i. The opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations. [401 KAR 61:015 Section 4(2)(c)]
 - ii. The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

- While burning only natural gas the permittee shall be deemed to be in compliance with the applicable emission standards. See **5. Specific Record Keeping Requirements** below.
 - When burning No. 2 fuel oil, see **3. Testing requirements**, and **5. Specific Record Keeping Requirements** below.
- c. Sulfur Dioxide Emission Limit pursuant to 401 KAR 61:015 Section 5(1) in a Class V region for sulfur dioxide, and based on a total source heat input capacity of 120 mmBtu/hr:

Sulfur dioxide emissions shall not exceed 4.4 pounds per mmBtu actual heat input, averaged over a 24-hour period, based on the following equation:

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Boiler Area**

$$8.0189 \times [\text{mmBtu/hour heat input as determined by 401 KAR}]^{0.1260} \\ 61:015(3)(1)$$

Compliance Demonstration Method:

While burning natural gas the permittee shall be deemed to be in compliance with the applicable emission standards. While burning No. 2 fuel oil with no greater than 0.5 wt% sulfur content, the boiler is deemed to be in compliance with the applicable emission standards. See **5. Specific Record Keeping Requirements** below.

3. Testing Requirements:

When burning No. 2 fuel oil, the permittee shall perform a qualitative visible observation of the opacity of emissions on a weekly basis and maintain a log of the observation. If visible emissions are seen, then the opacity shall be determined by EPA Reference Method 9. If Method 9 indicates emissions in excess of the standard, then an inspection shall be initiated for any necessary repairs. If a Method 9 test cannot be performed, the reason for not performing the test shall be documented.

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

- a. When burning No. 2 fuel oil, weekly records of the visual observation of opacity of emissions and the opacity determined by Reference Method 9, if any were taken, and repairs that were made due to any opacity reading which exceeded the standard.
- b. Annual records of the amount of fuel burned in the Boiler No. 2.
- c. Annual (calendar year) records of the types of fuel burned
- d. Fuel supplier certifications (including records of sulfur content) for all fuel oil burned

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Boiler Area**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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92**Boiler #3**

Description: Indirect Heat Exchanger, Babcock and Wilcox FM-101-8813

Primary Fuel: Natural gas

Backup Fuel: No. 2 fuel oil

Rated Capacity: 94.3 mmBtu/hr

Commenced: 1965

01**Natural Gas Combustion**

Controls: None

02**No. 2 Fuel Oil Combustion**

Less than 0.5 wt% sulfur

Controls: None

APPLICABLE REGULATIONS:

401 KAR 50:055, General Compliance Requirements.

401 KAR 61:015, Existing Indirect Heat Exchangers Constructed Prior to April 9, 1972.

40 CFR 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Boiler #3 is in the existing, large, liquid fuel subcategory as defined in 63.7575. Pursuant to 40 CFR 63.7506(b), it is subject only to the initial notification requirements of 40 CFR 63.9(b). It is not subject to the emission limits, work practice standards, performance testing, monitoring, site-specific monitoring plans (SSMP), record keeping and reporting requirements of 40 CFR 63 Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A. The initial notification requirements have been fulfilled.

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart D through Dc. Rules do not apply because emission point was commenced before the applicability dates.

1. Operating Limitations:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Boiler Area****2. Emission Limitations:**

- a. Mass Emission Limit pursuant to 401 KAR 61:015 Section 4(1) in a Priority I region for PM, and based on a total source heat input capacity of 214.3 mmBtu/hr:

Particulate emissions shall not exceed 0.27 pounds per mmBtu actual heat input, based on the following equation:

$$0.9634 \times [\text{mmBtu/hour heat input as determined by 401 KAR 61:015(3)(1)}]^{-0.2356}$$

Compliance Demonstration Method:

While burning only natural gas or No. 2 fuel oil the permittee shall be deemed to be in compliance with the applicable emission standards. See **5. Specific Record Keeping Requirements** below.

- b. Visible emissions shall not exceed 20% opacity on a 6-minute average basis, except as follows (based on Priority I region for PM). [401 KAR 61:015 Section 4(2)]
- i. The opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations. [401 KAR 61:015 Section 4(2)(c)]
 - ii. The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

- While burning only natural gas the permittee shall be deemed to be in compliance with the applicable emission standards. See **5. Specific Record Keeping Requirements** below.
 - When burning No. 2 fuel oil, see **3. Testing requirements**, and **5. Specific Record Keeping Requirements** below.
- c. Sulfur Dioxide Emission Limit pursuant to 401 KAR 61:015 Section 5(1) in a Class V region for sulfur dioxide, and based on a total source heat input capacity of 214.3 mmBtu/hr:

Sulfur dioxide emissions shall not exceed 4.1 pounds per mmBtu actual heat input, averaged over a 24-hour period, based on the following equation:

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Boiler Area**

$$8.0189 \times [\text{mmBtu/hour heat input as determined by 401 KAR}]^{0.1260}$$

Compliance Demonstration Method:

While burning natural gas the permittee shall be deemed to be in compliance with the applicable emission standards. While burning No. 2 fuel oil with no greater than 0.5 wt% sulfur content, the boiler is deemed to be in compliance with the applicable emission standards. See **5. Specific Record Keeping Requirements** below.

3. Testing Requirements:

When burning No. 2 fuel oil, the permittee shall perform a qualitative visible observation of the opacity of emissions on a weekly basis and maintain a log of the observation. If visible emissions are seen, then the opacity shall be determined by EPA Reference Method 9. If Method 9 indicates emissions in excess of the standard, then an inspection shall be initiated for any necessary repairs. If a Method 9 test cannot be performed, the reason for not performing the test shall be documented.

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

- a. When burning No. 2 fuel oil, weekly records of the visual observation of opacity of emissions and the opacity determined by Reference Method 9, if any were taken, and repairs that were made due to any opacity reading which exceeded the standard.
- b. Annual records of the amount of fuel burned in the Boiler No. 3.
- c. Annual (calendar year) records of the types of fuel burned
- d. Fuel supplier certifications (including records of sulfur content) for all fuel oil burned

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Boiler Area**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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Q4**Boiler #4**

Description: Indirect Heat Exchanger
Primary Fuel: Natural gas
Backup Fuel: No. 2 fuel oil
Rated Capacity: 82.9 mmBtu/hr
Commenced: 1996

01**Natural Gas Combustion**

Controls: None

02**No. 2 Fuel Oil Combustion**

Less than 0.5 wt% sulfur
Controls: None

APPLICABLE REGULATIONS:

401 KAR 50:055, General Compliance Requirements.

401 KAR 59:015, New Indirect Heat Exchangers Constructed On or After April 9, 1972.

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Dc, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity of 29 mw (100 mmBtu/hr) or less and 2.9 mw (10 mmBtu/hr) or greater which commenced construction, modification, or reconstruction after June 9, 1989.

40 CFR 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Boiler #4 is in the existing, large, liquid fuel subcategory as defined in 63.7575. Pursuant to 40 CFR 63.7506(b), it is subject only to the initial notification requirements of 40 CFR 63.9(b). It is not subject to the emission limits, work practice standards, performance testing, monitoring, site-specific monitoring plans (SSMP), record keeping and reporting requirements of 40 CFR 63 Subpart DDDDD or any other requirements in 40 CFR 63 Subpart A. The initial notification requirements have been fulfilled.

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for sulfur dioxide (SO₂).

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Boiler Area**

The monitoring requirements of 40 CFR 60.46c(a) and (d) shall not apply to affected facilities subject to 40 CFR 60.42c(h)(1) where the owner or operator of the affected facility seeks to demonstrate compliance with the SO₂ standards based on fuel supplier certification, as described under 40 CFR 60.48c(f) (1), (2), or (3), as applicable. [40 CFR 60.46c(e)]

1. Operating Limitations:

No. 2 fuel oil burned shall not exceed one million gallons during any consecutive 12-month period. [To preclude the applicability of 401 KAR 51:017, PSD, for SO₂]

Compliance Demonstration Method:

The permittee shall maintain records of monthly fuel oil use for this boiler and calculate the total fuel oil use for the previous 12-month period. See **5. Specific Record Keeping Requirements** below.

2. Emission Limitations:

- a. When burning natural gas or No. 2 fuel oil, particulate emissions shall not exceed 0.10 lb/mmBtu actual heat input (based on greater than 250 mmBtu/hr total source heat input capacity). [401 KAR 59:015, Section 4 (1)(b), Standard for Particulate Matter]

Compliance Demonstration Method:

While burning natural gas or No. 2 fuel oil the permittee shall be deemed to be in compliance with the applicable emission standards. See **5. Specific Record Keeping Requirements** below.

- b. When burning natural gas, visible emissions shall not exceed 20% opacity on a 6-minute average basis, except as follows [401 KAR 59:015 Section 4(2)]
 - i. A maximum of 40% opacity shall be permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot. [401 KAR 59:015, Section 4(2)(b)]
 - ii. The opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations. [401 KAR 59:015 Section 4(2)(c)]
 - iii. The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Boiler Area

Compliance Demonstration Method:

While burning natural gas the permittee shall be deemed to be in compliance with the applicable emission standards. See **5. Specific Record Keeping Requirements** below.

- c. When burning fuel oil, on and after the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, no owner or operator of an affected facility that combusts coal, wood, or oil and has a heat input capacity of 8.7 MW (30 million Btu/hr) or greater shall cause to be discharged into the atmosphere from that affected facility any gases that exhibit greater than 20% opacity (6-minute average), except for one 6-minute period per hour of not more than 27% opacity. [40 CFR 60.43c (c)]
The PM and opacity standards do not apply during periods of startup, shutdown, or malfunction. [40 CFR 60.43c (d)]

Compliance Demonstration Method:

When burning No. 2 fuel oil, see **3. Testing Requirements**, and **5. Specific Record Keeping Requirements** below.

- d. When burning natural gas, sulfur dioxide emissions shall not exceed 0.80 lb/mmBtu actual heat input (based on greater than 250 mmBtu/hr total source heat input capacity). [401 KAR 59:015 Section 5(1)(b)]

Compliance Demonstration Method:

While burning natural gas the permittee shall be deemed to be in compliance with the applicable emission standards. See **5. Specific Record Keeping Requirements** below.

- e. When burning No. 2 fuel oil, on and after the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, no owner or operator of an affected facility that combusts oil shall cause to be discharged into the atmosphere from that affected facility any gases that contain SO₂ in excess of 215 ng/J (0.50 lb/million Btu) heat input; or, as an alternative, no owner or operator of an affected facility that combusts oil shall combust oil in the affected facility that contains greater than 0.5 weight percent sulfur. The SO₂ emission limits and fuel oil sulfur limits apply at all times, including periods of startup, shutdown, and malfunction. [40 CFR 60.42c(d) and 60.42c(i)]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

Boiler Area

Compliance Demonstration Method:

Compliance with the emission limits or fuel oil sulfur limits may be determined based on a certification from the fuel supplier that includes the name of the oil supplier and a statement from the oil supplier that the oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c. [40 CFR 60.42c(h)]

- f. See Condition 5 of **Section D, Source Emission Limits and Testing Requirements**, for group emission limits for PM₁₀, SO₂, NO_x, CO, and VOC.
- 3. **Testing Requirements:**
 - a. When burning No. 2 fuel oil, the permittee shall perform a qualitative visible observation of the opacity of emissions on a weekly basis and maintain a log of the observation. If visible emissions are seen, then the opacity shall be determined by EPA Reference Method 9. If Method 9 indicates emissions in excess of the standard, then an inspection shall be initiated for any necessary repairs. If a Method 9 test cannot be performed, the reason for not performing the test shall be documented.
 - b. Upon request of the Division the permittee shall conduct additional Method 9 performance tests. Upon request of the Division the permittee shall conduct Method 5 tests to determine the concentration of PM.
- 4. **Specific Monitoring Requirements:**

None
- 5. **Specific Record Keeping Requirements:**
 - a. When burning No. 2 fuel oil, weekly records of the visual observation of opacity of emissions and the opacity determined by Reference Method 9, if any were taken, and repairs that were made due to any opacity reading which exceeded the standard.
 - b. Monthly records of the amount of fuel burned in the Boiler No. 4 and total No 2 fuel oil used in a 12-month period.
 - c. Annual (calendar year) records of the types of fuel burned in the boiler shall be maintained.
 - d. Records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [401 KAR 59:005 Section 3(2) and 40 CFR 60.7(b)]
 - e. Records of fuel supplier certification for all fuel oil burned shall be kept on site. Certification shall include the following information: For distillate oil: (i) The name of the oil supplier; and (ii) A statement from the oil supplier that the

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS**Boiler Area**

oil complies with the specifications under the definition of distillate oil in 40 CFR 60.41c. [40 CFR 60.48c(f)]

- f. Records of the amounts of each fuel combusted during each day shall be maintained. [40 CFR 60.48c(g)]
- g. All records required by 40 CFR 60 Subpart Dc Section 40.8c shall be maintained for a period of two years following the date of such record.
- h. A file of all information required by 40 CFR 60 Subpart Dc and 401 KAR 59:015 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records. [401 KAR 59:005 Section 3(4) and 40 CFR 60.7(f)]

6. Specific Reporting Requirements:

- a. The permittee shall submit a notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information specified in 40 CFR 60.7(4). [401 KAR 59:005, Section 3(1)(d) and 40 CFR 60.7(a)(4)]
- b. The permittee shall submit Method 9 performance tests. [40 CFR 60.48c(b)]
- c. The permittee shall keep records and submit reports to the Division containing the following information:
 - i. Calendar dates covered in the reporting period.
 - ii. Records of fuel supplier certification as described under 40 CFR 60.48c (f)(1), (2), or (3), as applicable. In addition to records of fuel supplier certifications, the report shall include a certified statement signed by the permittee that the records of fuel supplier certifications submitted represent all of the fuel combusted during the reporting period.
 - iii. The reporting period for the reports is each 6-month period. All reports shall be submitted to the Division's Paducah regional office and shall be postmarked by the 30th day following the end of the reporting period. [40 CFR 60.48c(d), 60.48c(e), and 60.48c(j)]

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Monomer Plant

MONOMER PLANT FUTURE APPLICABLE REQUIREMENTS

APPLICABLE REGULATIONS:

- a. The Monomer Plant is an existing miscellaneous organic chemical manufacturing process unit (MCPU) as defined in 40 CFR 63 Subpart FFFF (National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing). The Monomer Plant shall comply with the applicable provisions of 40 CFR 63 Subpart FFFF no later than the compliance date specified in Subpart FFFF, as updated. The specific emission points and specific process units, which are subject to 40 CFR 63 Subpart FFFF requirements, shall be defined in the Notification of Compliance Status report required below.
- b. The permittee shall submit a notification of compliance status report for the Monomer Plant MCPU addressing compliance with 40 CFR 63 Subpart FFFF. Pursuant to 40 CFR 63.2520(d)(1), the report must be submitted no later than 150 days after the applicable compliance date specified in 63.2445.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Monomer Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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33	01	Two Molecular Sieve Dryers - Regeneration Description: Molecular sieve dryers V-208A and B Capacity: 365 regenerations per year (total for both dryers) Commenced: 1970 Controls: None
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APPLICABLE REGULATIONS:

None

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for volatile organic compounds (VOC).

1. Operating Limitations:

None

2. Emission Limitations:

VOC emissions shall not exceed 4 tons during any consecutive 12-month period.
[To preclude the applicability of 401 KAR 51:017, PSD, for VOC]

Compliance Demonstration Method:

Compliance is demonstrated by the maximum capacity of 365 regenerations per year and the emission factor of 2.42 lb VOC emitted per regeneration.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

- a. Records of the date and number of regenerations of the Molecular Sieve Dryers shall be maintained on a monthly basis and totaled for any twelve (12) consecutive months. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Monomer Plant

- b. Retain the results of the most recent performance test for this emission point and the Compliance Demonstration Protocol for the performance test. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC]
- 6. **Specific Reporting Requirements:**
None
- 7. **Specific Control Equipment Operating Conditions:**
None
- 8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Monomer Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
34		Monomer Air Column Description: Monomer air column V-211R Commenced: 1970
	01	Monomer Air Column Vent to Atmosphere Controls: None
	02	Monomer Air Column Vent to Thermal Oxidizer Controls: F-134a thermal oxidizer (EP Q5) Emissions are accounted for at the thermal oxidizer emission unit
	03	Monomer Air Column Vent to Hazardous Waste Incinerator Controls: Hazardous waste incinerator (EP A6) Emissions are accounted for at the incinerator emission unit

APPLICABLE REGULATIONS:

Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002.

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for volatile organic compounds (VOC).

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations that produce any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate, which commenced construction, modification, or reconstruction after December 30, 1983.

1. Operating Limitations:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Monomer Plant****2. Emission Limitations:**

- a. Total VOC from the monomer air column (EP 34) and monomer lights column (EP 35) shall not exceed 40 tons in any consecutive 12-month period. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC]

Compliance Demonstration Method:

Compliance will be demonstrated by monitoring the stream vented directly to the atmosphere with a mass flow meter and gas chromatograph, and performing monthly calculations of VOC emissions, and calculating the total emissions for the previous 12-month period. Emissions controlled by the thermal oxidizer and the incinerator are negligible.

- b. The permittee shall capture all point source VOC emissions from the monomer air column vent (EP 34) and achieve a minimum destruction efficiency of 95% for the captured emissions. Fugitive emissions shall not be included in the capture requirement. The permittee shall use the thermal oxidizer (EP Q5) or hazardous waste incinerator (EP A6) for such control. [Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002]

Compliance Demonstration Method:

Compliance with the 95% VOC destruction efficiency for captured VOC shall be demonstrated by recording the calendar year (January 1st to December 31st) annual hours vented to the hazardous waste incinerator, thermal oxidizer, and atmosphere, and calculating the calendar year average abatement using the following equation:

$$A = ((H_{hwi} \times 0.9999) + (H_{to} \times 0.9999) + (H_{atm} \times 0)) / (H_{hwi} + H_{to} + H_{atm})$$

where:

A = Calendar year average abatement
H_{hwi} = Total calendar year hours vented to hazardous waste incinerator
H_{to} = Total calendar year hours vented to thermal oxidizer
H_{atm} = Total calendar year hours vented to atmosphere

and

0.9999 is the hazardous waste incinerator VOC abatement
0.9999 is the thermal oxidizer VOC abatement
0 is the atmospheric vent VOC abatement

If the calendar year average abatement (A) is 0.95 or greater, then compliance has been demonstrated.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Monomer Plant****3. Testing Requirements:**

None

4. Specific Monitoring Requirements:

VOC emissions vented directly to the atmosphere shall be monitored by a mass flow meter and gas chromatograph. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC]

5. Specific Record Keeping Requirements:

- a. Retain records of the daily mass flow and VOC concentration of material vented directly to the atmosphere. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC]
- b. Retain monthly calculations of monthly VOC emissions and total emissions for the previous 12-month period. The total pounds per day vented directly to the atmosphere (read from the gas flow meter) multiplied by the average daily VOC concentration (determined by the gas chromatograph) shall be used to calculate the daily pounds of VOC emitted directly to the atmosphere. The daily pounds of VOC emitted shall be totaled over a calendar month to yield monthly and rolling 12-month total VOC emissions. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC]
- c. Retain records of the calendar year annual hours vented to the hazardous waste incinerator, thermal oxidizer, and atmosphere. [Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002]
- d. Retain records of the calculated calendar year average VOC abatement as described under 2.b above. [Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002]
- e. Retain gas chromatograph performance evaluations and calibration checks.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

See the control equipment operating conditions for the F-134a Thermal Oxidizer (EP Q5) and the Hazardous Waste Incinerator (EP A6).

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Monomer Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
35		Monomer Lights Column Description: Monomer lights column V-116 Commenced: 1970
	01	Monomer Lights Column Vent to Atmosphere Controls: None
	02	Monomer Lights Column Vent to Thermal Oxidizer Controls: F-134a thermal oxidizer (EP Q5) Emissions are accounted for at the thermal oxidizer emission unit
	03	Monomer Lights Column Vent to Hazardous Waste Incinerator Controls: Hazardous waste incinerator (EP A6) Emissions are accounted for at the incinerator emission unit

APPLICABLE REGULATIONS:

Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002.

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD) for volatile organic compounds (VOC) and ozone depleting substances (ODS).

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations that produce any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate, which commenced construction, modification, or reconstruction after December 30, 1983.

1. Operating Limitations:

None

2. Emission Limitations:

- a. Total VOC emitted directly to the atmosphere from the monomer air column (EP 34) and monomer lights column (EP 35) shall not exceed 40 tons in any

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Monomer Plant**

consecutive 12-month period. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC]

Compliance Demonstration Method:

Compliance will be demonstrated by monitoring the stream vented directly to the atmosphere with a mass flow meter and gas chromatograph, and performing monthly calculations of VOC emissions, and calculating the total emissions for the previous 12-month period. Emissions controlled by the thermal oxidizer and the incinerator are negligible.

- b. ODS emissions from the monomer lights column (EP 35) shall not exceed 12 tons in any consecutive 12-month period. [To preclude the applicability of 401 KAR 51:017, PSD, for ODS]

Compliance Demonstration Method:

Compliance will be demonstrated by monitoring the stream vented to the atmosphere with a mass flow meter and gas chromatograph, and performing monthly calculations of monthly ODS emissions, and calculating the total emissions for the previous 12-month period. Emissions controlled by the thermal oxidizer and the incinerator are negligible.

- c. The permittee shall capture all point source VOC emissions from the monomer lights column vent (EP 35) and achieve a minimum destruction efficiency of 95% for the captured emissions. Fugitive emissions shall not be included in the capture requirement. The permittee shall use the thermal oxidizer (EP Q5) or hazardous waste incinerator (EP A6) for such control. [Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002]

Compliance Demonstration Method:

Compliance with the 95% VOC destruction efficiency for captured VOC shall be demonstrated by recording the calendar year (January 1st through December 31st) annual hours vented to the hazardous waste incinerator, thermal oxidizer, and atmosphere, and calculating the calendar year average abatement using the following equation:

$$A = ((H_{hwi} \times 0.9999) + (H_{to} \times 0.9999) + (H_{atm} \times 0)) / (H_{hwi} + H_{to} + H_{atm})$$

where:

A = Calendar year average abatement

H_{hwi} = Total calendar year hours vented to hazardous waste incinerator

H_{to} = Total calendar year hours vented to thermal oxidizer

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Monomer Plant**

H_{atm} = Total calendar year hours vented to atmosphere

and

0.9999 is the hazardous waste incinerator VOC abatement

0.9999 is the thermal oxidizer VOC abatement

0 is the atmospheric vent VOC abatement

If the calendar year average abatement (A) is 0.95 or greater, then compliance has been demonstrated.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

VOC and ODS emissions vented directly to the atmosphere shall be monitored by a mass flow meter and gas chromatograph. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC and ODS]

5. Specific Record Keeping Requirements:

- a. Retain records of the daily mass flow and VOC and ODS concentrations of material vented directly to the atmosphere. [To preclude the applicability of 401 KAR 51:017 for VOC and ODS]
- b. Retain monthly calculations of monthly VOC and ODS emissions and total emissions for the previous 12-month period. The total pounds per day vented directly to the atmosphere (read from the gas flow meter) multiplied by the average daily VOC and ODS concentrations (determined by the gas chromatograph) shall be used to calculate the daily pounds of VOC and ODS emitted directly to the atmosphere. The daily pounds emitted shall be totaled over a calendar month to yield monthly and rolling 12-month total emissions. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC and ODS]
- c. Retain records of the calendar year annual hours vented to the hazardous waste incinerator, thermal oxidizer, and atmosphere. [Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002]
- d. Retain records of the calculated calendar year average VOC abatement as described under 2.c above. [Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002]
- e. Retain gas chromatograph performance evaluations and calibration checks.

6. Specific Reporting Requirements:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Monomer Plant

7. **Specific Control Equipment Operating Conditions:**
See the control equipment operating conditions for the F-134a Thermal Oxidizer (EP Q5) and the Hazardous Waste Incinerator (EP A6).
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Monomer Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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45	01	Regeneration Heater for Molecular Sieve Dryer Description: Natural gas fired indirect heat exchanger H-207 Capacity: 1.5 mmBtu/hr Commenced: 1970 Controls: None
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APPLICABLE REGULATIONS:

401 KAR 50:055, General Compliance Requirements.

401 KAR 61:015, Existing indirect heat exchangers constructed prior to April 9, 1972.

40 CFR 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. The regeneration heater is in the existing small gaseous fuel subcategory as defined in 40 CFR 63.7575, and is therefore an affected source under 40 CFR 63 Subpart DDDDD. Pursuant to 40 CFR 63.7506(c)(3) of Subpart DDDDD, boilers and process heaters in the existing small gaseous fuel subcategory are not subject to the initial notification requirements of 40 CFR 63.9(b), and are not subject to any requirements in 40 CFR 63 Subpart DDDDD or in 40 CFR 63 Subpart A.

NON-APPLICABLE REGULATIONS:

As specified in 401 KAR 61:015, Sections 6(4) and (5), fuel monitoring is not required for indirect heat exchangers less than 250 mmBtu/hr heat input capacity.

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart D through Dc. Rules do not apply because emission point was commenced before the applicability dates.

1. Operating Limitations:

None

2. Emission Limitations:

- a. Mass Emission Limit pursuant to 401 KAR 61:015 Section 4(1) in a Priority I region for PM, and based on a total source heat input capacity of 215.8 mmBtu/hr:

Particulate emissions shall not exceed 0.27 pounds per mmBtu actual heat input, on a 3-hour average basis, based on the following equation:

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Monomer Plant**

$$0.9634 \times [\text{mmBtu/hour heat input as determined by 401 KAR 61:015(3)(1)}]^{-0.2356}$$

Compliance Demonstration Method:

While burning natural gas the permittee shall be deemed to be in compliance with the applicable emission standards.

- b. Visible emissions shall not exceed 20% opacity on a 6-minute average basis, except as follows (based on Priority I region for PM). [401 KAR 61:015 Section 4(2)]
 - i. The opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations. [401 KAR 61:015 Section 4(2)(c)]
 - ii. The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

While burning natural gas the permittee shall be deemed to be in compliance with the applicable emission standards.

- c. Sulfur Dioxide Emission Limit pursuant to 401 KAR 61:015 Section 5(1) in a Class V region for sulfur dioxide, and based on a total source heat input capacity of 215.8 mmBtu/hr:

Sulfur dioxide emissions shall not exceed 4.1 pounds per million BTU actual heat input, on a 24-hour average basis, based on the following equation:

$$8.0189 \times [\text{mmBtu/hour heat input as determined by 401 KAR 61:015(3)(1)}]^{-0.1260}$$

Compliance Demonstration Method:

While burning natural gas the permittee shall be deemed to be in compliance with the applicable emission standards.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Monomer Plant

5. Specific Record Keeping Requirements:

None

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Monomer Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
63		Monomer Plant Fugitive Emissions Description: Fugitive equipment leaks Commenced: 1970
	01	Monomer VOC fugitive emissions Controls: None
	02	Monomer HCl fugitive emissions Controls: None
	03	Monomer Chlorine fugitive emissions Controls: None
	04	Monomer ODS fugitive emissions Controls: None

APPLICABLE REGULATIONS:**State-Origin Applicable Regulations:**

401 KAR 63:021, Existing Sources Emitting Toxic Air Pollutants applies to hydrochloric acid (HCl) and chlorine (Cl₂).

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for volatile organic compounds (VOC).

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry for Which Construction or Modification Commenced After January 5, 1981. Rule does not apply since process unit does not produce as an intermediate or final product a chemical listed in 40 CFR 60.489.

1. Operating Limitations:

None

2. Emission Limitations:

- a. Fugitive VOC emissions from the monomer plant process equipment shall not exceed 15.5 tons during any consecutive 12-month period. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Monomer Plant

Compliance Demonstration Method:

Compliance shall be demonstrated by performing monthly calculations of monthly fugitive VOC emissions, and calculating the total emissions for the previous 12-month period.

Calculations shall be based on the following formula:

$$\text{Monthly VOC emissions} = (\text{component counts}) * (\text{emission factors}) * (1 - \text{control efficiency})$$

- b. See Condition 4 (a) of **SECTION D, Source Emission Limitations and Testing Requirements** for HCl and Chlorine limits.
3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Record Keeping Requirements:**
 - a. Retain monthly calculations of monthly VOC emissions and total emissions for the previous 12-month period. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC]
 - b. See Condition 4 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements**.
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
None
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Monomer Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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AR		Monomer Plant Wastewater Emissions Description: Fugitives from monomer plant wastewater Commenced: 1970
	01	Monomer wastewater VOC emissions Controls: None
	02	Monomer wastewater ODS emissions Controls: None

APPLICABLE REGULATIONS:

None

1. **Operating Limitations:**
None
2. **Emission Limitations:**
None
3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Record Keeping Requirements:**
None
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
None
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

POLYMER PLANT FUTURE APPLICABLE REQUIREMENTS

APPLICABLE REGULATIONS:

- a. The Polymer Plant is an existing miscellaneous organic chemical manufacturing process unit (MCPU) as defined in 40 CFR 63 Subpart FFFF (National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing). The Polymer Plant shall comply with the applicable provisions of 40 CFR 63 Subpart FFFF no later than the compliance date specified in Subpart FFFF, as updated. The specific emission points and specific process units, which are subject to 40 CFR 63 Subpart FFFF requirements, shall be defined in the Notification of Compliance Status report required below.
- b. The permittee shall submit a notification of compliance status report for the Polymer Plant MCPU addressing compliance with 40 CFR 63 Subpart FFFF. Pursuant to 40 CFR 63.2520(d)(1), the report must be submitted no later than 150 days after the applicable compliance date specified in 40 CFR 63.2445.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****EMISSION PROCESS****POINT UNIT NAME AND DESCRIPTION****58****Five Polymer Reactors**

Description: Reactor V-303A, commenced 1998
Reactor V-303B, commenced 1996
Reactor V-303C, commenced 1999
Reactor V-303D, commenced 2000
Reactor V-303E, proposed 2006

Capacity: 24 million lb/yr polymer (dry basis)

01**Venting to Polymer Gasholder V568 (EP 47)**

Controls: F-134a Thermal Oxidizer (EP Q5) or Hazardous Waste Incinerator (EP A6)

Emissions are accounted for at the thermal oxidizer and incinerator units.

02**Venting to Monomer Gas Recovery Vessel (EP AE)**

Controls: Gases are either transferred to the Monomer Plant for recovery or transferred to the Polymer Gasholder. Emissions from the Polymer Gasholder are controlled by the F-134a Thermal Oxidizer (EP Q5) or Hazardous Waste Incinerator (EP A6).

Emissions are accounted for at the thermal oxidizer and incinerator units

APPLICABLE REGULATIONS:

None

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart RRR, Standards of Performance for VOC Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes. Rule does not apply since the process unit does not produce as a product, co-product, by-product or intermediate a chemical listed in 40 CFR 60.707.

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for volatile organic compounds (VOC) and ozone depleting substances (ODS).

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

1. Operating Limitations:

- a. Total combined annual input of trichlorofluoromethane (F-11) to the polymer plant reactors shall not exceed 15,000 lb/yr for any consecutive 12-month period. [To preclude the applicability of 401 KAR 51:017, PSD, for ODS]

Compliance Demonstration Method:

Monthly records of the total combined F-11 input to the reactors each month, and the total input for the previous 12-month period.

- b. Prior to transferring a batch from the reactors, the reactors shall be vented to either the Polymer Gasholder or Monomer Gas Recovery Vessel. The calendar month average reactor pressure prior to transfer shall be below 15 psig. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC]

Compliance Demonstration Method:

Records of the reactor vent pressure prior to initiating a transfer for each batch, and calculations of the calendar month average for each month.

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

- a. Records of the amount of F-11 input to the reactors each month shall be maintained and totaled for the previous 12-month period.
- b. The reactor vent pressure shall be recorded prior to initiating a transfer for each batch, and the calendar month average for each month shall be calculated and recorded.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

- a. The Five Polymer Reactors shall be vented to either the Thermal Oxidizer (EP Q5), the Hazardous Waste Incinerator (EP A6), the Polymer Gasholder (EP 47), or the Monomer Gas Recovery Vessel (EP AE) at all times the reactors are in operation.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

- b. See the control equipment operating conditions for the F-134a Thermal Oxidizer (EP Q5) and the Hazardous Waste Incinerator (EP A6)
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
47	01	Polymer Gasholder Description: Polymer gasholder V-568 Commenced: 1982 Controls: F-134a Thermal Oxidizer (EP Q5) or Hazardous Waste Incinerator (EP A6) Emissions are accounted for at the thermal oxidizer and incinerator units.

APPLICABLE REGULATIONS:

None

1. Operating Limitations:

None

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

None

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

- Gases discharged from the Polymer Gasholder shall be vented to either Thermal Oxidizer (EP Q5) or Hazardous Waste Incinerator (EP A6) at all times the Polymer Gasholder is in operation.
- See the control equipment operating conditions for the F-134a Thermal Oxidizer (EP Q5) and the Hazardous Waste Incinerator (EP A6)

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
AE	01	Monomer Gas Recovery Vessel Description: Monomer gas recovery vessel V-9002 Commenced: 1997 Controls: Gases are typically either transferred to the Monomer Plant for recovery or transferred to the Polymer Gasholder. Emissions due to gases transferred to the Polymer Gasholder are accounted for at the F-134a Thermal Oxidizer (EP Q5) or at the Hazardous Waste Incinerator (EP A6). During maintenance activities the Monomer Gas Recovery Vessel may be used to transfer gases directly to the F-134a Thermal Oxidizer (EP Q5) or the Hazardous Waste Incinerator (EP A6). Emissions are accounted for at the F-134a thermal oxidizer or incinerator units.

APPLICABLE REGULATIONS:

None

1. **Operating Limitations:**
None
2. **Emission Limitations:**
None
3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Record Keeping Requirements:**
None
6. **Specific Reporting Requirements:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

7. Specific Control Equipment Operating Conditions:

- a. Gases discharged from the Monomer Gas Recovery Vessel (EP AE) shall be either transferred to the Monomer Plant, transferred to the Polymer Gasholder, or vented to either Thermal Oxidizer (EP Q5) or Hazardous Waste Incinerator (EP A6) at all times the Monomer Gas Recovery Vessel is in operation.
- b. See the control equipment operating conditions for the F-134a Thermal Oxidizer (EP Q5) and the Hazardous Waste Incinerator (EP A6).

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****EMISSION PROCESS****POINT UNIT NAME AND DESCRIPTION****AH****Polymer Plant Reactor Feed System Fug. Emissions 1**

Description: Fugitive equipment leaks from reactors V-303A to D feed system (not including reactors and downstream equipment, which are accounted for at EP GR1)

Commenced: Multiple

01**Rx Feed System VOC Fugitive Emissions**

Controls: None

02**Rx Feed System ODS Fugitive Emissions**

Controls: None

AI**Polymer Plant Reactor Feed System Fug. Emissions 2**

Description: Fugitive equipment leaks from reactor V-303E feed system (not including reactors and downstream equipment, which are accounted for at EP GR1)

Commenced: proposed 2006

01**Rx Feed System VOC Fugitive Emissions**

Controls: None

02**Rx Feed System ODS Fugitive Emissions**

Controls: None

APPLICABLE REGULATIONS:

None

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry. Rule does not apply since process unit does not produce as an intermediate or final product a chemical listed in 40 CFR 60.489.

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for volatile organic compounds (VOC).

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

1. Operating Limitations:

None

2. Emission Limitations:

For EP AH, VOC emissions shall not exceed 39 tons during any consecutive 12-month period. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC]

Compliance Demonstration Method:

Monthly calculations of monthly fugitive VOC emissions and the total emissions from EP AH for the previous 12-month period.

Calculations shall be based on the following formula:

Monthly VOC emissions = (component counts)*(emission factors)*(1-control efficiency)

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

Records of monthly calculations of monthly VOC emissions for EP AH shall be maintained and totaled for the previous 12-month period.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****EMISSION PROCESS****POINT UNIT NAME AND DESCRIPTION****GR1****Polymer Plant Latex Processing Organic Emissions**

Description: Group organic emissions from polymer plant latex processing (does not include reactor feed system fugitive equipment leaks, included under EP AH and AI).

See equipment list below

Commenced: See below

Equipment Description	ID	Date Commenced
Polymer Reactor V-303A (headspace purge to screens) – EP 58	V-303A	1998
Polymer Reactor V-303B (headspace purge to screens) – EP 58	V-303B	1996
Polymer Reactor V-303C (headspace purge to screens) – EP 58	V-303C	1999
Polymer Reactor V-303D (headspace purge to screens) – EP 58	V-303D	2000
Polymer Reactor V-303E (headspace purge to screens) – EP 58	V-303E	2006 (proposed)
East Spray Dryer with Process Collectors – EP 38	DRYR-325; F-316 A/B/C	Modified 2001
West Spray Dryer with Process Collectors – EP E8	DRYR-1325; F-1316 A/B/C	1991
Rotary Dryer with Process Collector – EP 41	DRYR-10; SEPR-08	1967
Latex Screeners (two) – (EP D8 for F-98-023)	SEPR-02, SEPR-1500B	1992
Screened Latex Pump Tanks (two) – (EP D8 for F-98-023)	V-802, V-1500B	1992
Latex Screeners (three) – (EP D9 for F-98-023)	SEPR-3204, SEPR-1500A, SEPR-1500B	1992 1992 2006 (proposed)
Screened Latex Pump Tanks (three) – (EP D9 for F-98-023)	V-801, V-1500A, V-1500C	1992 1992 2006 (proposed)
Latex Storage Tank – (EP E4 for F-98-023)	V-21	1964
Latex Truck Loadout – (EP E5 for F-98-023)	--	1965
Latex Hold Tank – (EP E3 for F-98-023)	TK-04	1965

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

Equipment Description	ID	Date Commenced
Latex Drum and Tote Filling – (EP E6 for F-98-023)	--	1964-2006
Latex Check Tanks (four) – (EP 36 for F-98-023)	V-307 A-D	1969(A-C), 2005
Latex Check Tanks (eight) – (EP 36 for F-98-023)	V-307 E-L	E-J 1969; K-L 1977
East Coagulator Feed Tanks (two) – (EP 37 for F-98-023)	V-312 A/B	1969
West Coagulator Feed Tanks (two) – (EP E1 for F-98-023)	V-1312 A/B	1992
Polymer Trap	--	--
Fugitive Emissions from Kynar Polymer Wastewater – (EP AG for F-98-023)	--	--
Fugitive Equipment Leaks (reactors and downstream)	--	Multiple
East Coagulator-does not vent – (EP AF for F-98-023)	C-551	1999
East Wash Column-does not vent – (EP AF for F-98-023)	C-552A	1969
East Thickener-does not vent – (EP AF for F-98-023)	V-555	1969
West Coagulator-does not vent – (EP E7 for F-98-023)	C-1551	1991
West Wash Column-does not vent – (EP E7 for F-98-023)	C-1552	1991
West Thickener-does not vent – (EP E7 for F-98-023)	V-1555	1991

01 Polymer latex processing VOC emissions
Controls: None

02 Polymer latex processing ODS emissions
Controls: None

APPLICABLE REGULATIONS:

None

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for volatile organic compounds (VOC) and ozone depleting substances (ODS).

1. Operating Limitations:
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****2. Emission Limitations:**

- a. VOC emissions shall not exceed 60 tons during any consecutive 12-month period. [To preclude the applicability of 401 KAR 51:017, PSD, for VOC]
- b. ODS emissions shall not exceed 4.83 tons during any consecutive 12-month period. [To preclude the applicability of 401 KAR 51:017, PSD, for ODS]

Compliance Demonstration Method:

Monthly calculations of VOC and ODS emissions, and calculations of the total emissions for the previous 12-month period.

Calculations shall use the most recent emission factors submitted to the Division derived from testing performed strictly in accordance with the approved Compliance Demonstration Protocol submitted at least 90 days prior to the test. Emissions shall be based on the following formula:

$$\text{Monthly VOC/ODS emissions} = (\text{monthly throughput}) * (\text{emission factor}) * (1 - \text{control efficiency})$$

3. Testing Requirements:

Except as specified below, performance tests shall be conducted once every five years, and shall also be conducted for new products within 180 days after initiating production of a new product or using a new raw material (or at the next scheduled production of the product or use of the raw material, whichever is later), where the new product or new raw material is expected to result in increased emissions of VOC or ODS. Performance tests shall also be performed upon request by the Division. Testing shall be performed in accordance with a Compliance Demonstration Protocol submitted to the Division for review and approval. The protocol shall be submitted to the Division at least 90 days prior to conducting the performance test. The test report shall be submitted to the Division no later than 60 days following completion of the test.

- i. Testing is not required for production of new products or use of new raw materials on a trial basis (less than fifteen batches). For such trials the permittee shall submit a notification to the Division as specified in Specific Reporting Requirements below.
- ii. Neither testing nor notification is required for production of new products or use of new raw materials that are not expected to result in increased emissions of VOC or ODS.

4. Specific Monitoring Requirements:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

5. Specific Record Keeping Requirements:

- a. Retain monthly calculations of monthly VOC and ODS emissions and total emissions for the previous 12-month period.
- b. For each performance test performed on this emission point, retain the results of the performance test and the Compliance Demonstration Protocol for the performance test.
- c. Retain monthly records of new materials used or products produced.
- d. Retain records of all trial batches produced.

6. Specific Reporting Requirements:

At least 7 days prior to production of new products or use of new raw materials on a trial basis (less than 15 batches) that are expected to result in increased emissions of VOC or ODS, the permittee shall submit a notification to the Paducah regional office. The notification shall include an estimate of the VOC and ODS emissions expected from the trial.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
38	01	East Spray Dryer and Process Collectors
		Description: Dryer DRYR-325 Process collectors F-316A, B, and C
		Capacity: 2,250 lb/hr dried powder (batch average)
		Commenced: Modified 2001
		Controls: None

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations.

1. Operating Limitations:

None

2. Emission Limitations:

- a. Particulate matter emissions shall not exceed the calculated allowable rate as determined by the following equation. [401 KAR 59:010 Section 3(2)]

$$\begin{aligned}
 E_{\text{Allowable}} &= 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr} \\
 &= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or equal to } 30 \text{ ton/hr} \\
 &= 17.31 * P^{0.16} \text{ for } P \text{ greater than } 30 \text{ ton/hr}
 \end{aligned}$$

where

$$E_{\text{Allowable}} = \text{Allowable rate of particulate emissions (lbs/hr)}$$

$$P = \text{Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)}$$

Compliance Demonstration Method:

Compliance is demonstrated based on an emission factor of 2.4 lbs PM_t/ton of material processed and a maximum batch processing rate of 1.125 tons dried/hr.

Based on the following formula,

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

$$PM_t \text{ emissions (lbs/hr)} = (\text{processing rate}) * (\text{emission factor})$$

Where PM_t = Total Particulate Matter

the particulate emissions are less than the 401 KAR 59:010 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4. Specific Monitoring Requirements** below, will be performed to indicate operation of the air pollution control equipment.

- b. Visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis, except as specified below. [401 KAR 59:010 Section 3(1)(a)]
The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

Weekly visual observations as specified in **4. Specific Monitoring Requirements** and **5. Specific Record Keeping Requirements** below.

3. Testing Requirements:

See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack. Observations are not required for indoor vents. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

- a. Retain records of maintenance performed on the process collectors.
- b. Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.

If visible emissions are observed, then the following additional records shall be retained:

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
- ii. The results of the Reference Method 9 opacity test.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
None
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
E8	01	West Spray Dryer and Process Collectors
		Description: Dryer DRYR-1325 Process collectors F-1316A, B, and C
		Capacity: 1,690 lb/hr dried powder (batch average)
		Commenced: Modified 2001
		Controls: None

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations.

1. Operating Limitations:

None

2. Emission Limitations:

- a. Particulate matter emissions shall not exceed the calculated allowable rate as determined by the following equation. [401 KAR 59:010 Section 3(2)]

$$\begin{aligned}
 E_{\text{Allowable}} &= 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr} \\
 &= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or equal to } 30 \text{ ton/hr} \\
 &= 17.31 * P^{0.16} \text{ for } P \text{ greater than } 30 \text{ ton/hr}
 \end{aligned}$$

where

$$E_{\text{Allowable}} = \text{Allowable rate of particulate emissions (lbs/hr)}$$

$$P = \text{Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)}$$

Compliance Demonstration Method:

Compliance is demonstrated based on an emission factor of 2.4 lbs PM_t/ton of material processed, a maximum batch processing rate of 0.85 tons dried/hr.

Based on the following formula,

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

$$PM_t \text{ emissions (lbs/hr)} = (\text{processing rate}) * (\text{emission factor})$$

where PM_t = Total Particulate Matter

the particulate emissions are less than the 401 KAR 59:010 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4. Specific Monitoring Requirements** below, will be performed to indicate operation of the air pollution control equipment.

- b. Visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis, except as specified below. [401 KAR 59:010 Section 3(1)(a)]
 - i. The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

Weekly visual observations as specified in **4. Specific Monitoring Requirements** and **5. Specific Record Keeping Requirements** below.

3. Testing Requirements:

See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack. Observations are not required for indoor vents. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

- a. Retain records of maintenance performed on the process collectors.
- b. Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.

If visible emissions are observed, then the following additional records shall be retained:

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
- ii. The results of the Reference Method 9 opacity test.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
None
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****EMISSION PROCESS****POINT UNIT NAME AND DESCRIPTION****41****Rotary Dryer and Process Collector**

Description: Dryer DRYR-10

Process collector SEPR-08

Capacity: 350 lb/hr dried powder (batch average)

Commenced: 1967

01**Polymer Drying**

Controls: None

APPLICABLE REGULATIONS:

401 KAR 61:020, Existing Process Operations.

1. Operating Limitations:

None

2. Emission Limitations:

- a. Particulate matter emissions shall not exceed the calculated allowable rate as determined by the following equation. [401 KAR 61:020 Section 3(2)]

$$E_{\text{Allowable}} = 2.58 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr}$$

where

$$E_{\text{Allowable}} = \text{Allowable rate of particulate emissions (lbs/hr)}$$

$$P = \text{Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)}$$

Compliance Demonstration Method:

Compliance is demonstrated by an emission factor of 1.02 lbs PM_t/ton of material processed, and a maximum batch capacity of 0.175 tons dried/hr.

Based on the following formula,

$$\text{PM}_t \text{ emissions (lbs/hr)} = (\text{processing rate}) * (\text{emission factor}) * (1 - \%CE)$$

Where PM_t = Total Particulate Matter

%CE = Control Efficiency

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

the particulate emissions are less than the 401 KAR 61:020 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4. Specific Monitoring Requirements** below, will be performed to indicate operation of the air pollution control equipment.

- b. Visible emissions shall not equal or exceed 40% opacity on a 6-minute average basis, except as specified below. [401 KAR 61:020 Section 3(1)(a)]
The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

Weekly visual observations as specified in **4. Specific Monitoring Requirements** and **5. Specific Record Keeping Requirements** below.

3. Testing Requirements:

See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack. Observations are not required for indoor vents. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

- a. Retain records of maintenance performed on the process collectors.
- b. Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.

If visible emissions are observed, then the following additional records shall be retained:

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
- ii. The results of the Reference Method 9 opacity test.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****EMISSION PROCESS****POINT UNIT NAME AND DESCRIPTION****PLA****W&P Extruder and Pellet Packaging Polymer Process Path**

Description: Dry polymer processing and packaging. Polymer from on-site production and off-site sources can be processed.

See below for equipment list

Commenced: See below

Capacity: 1,500 lb/hr (batch average for polymer processed through this path)

01**W&P Extruder Process**

Controls: Fabric filters for the following equipment:
V-560A, V-560B, V-1560, and SIZR-563

Equipment	ID	Date Commenced
Process Collector for West / East Nauta Blender	F-327 / SEPR-1327	1970 / 1995
West / East Nauta Blender	V-334 / MIXR-1334	1970 / 1995
East Nauta Blender Bag Dump Station	--	1995
West / East / New Silo Process Collector	F-554A / F-544B / F-1554	1982 / 1982 / 1991
West / East / New Powder Silo	V-560A / V-560B / V-1560	1982 / 1982 / 1991
West Densifier Feed Process Collector	F-401	1982
West Densifier	SIZR-563	2003
Feed Hopper for W/P Extruder	V-401	1982
W/P Extruder	EX-401A	1982
Pellet Purge Hopper for W/P Extruder	V-402	1982
W/P Extruder Pellet Dryer	DRYR-405	1982
W/P Dense Phase System (Two Hopper System)	TK-1708C	1991
W/P Pellet Receiver / Deduster	V-1709C / F-1710	1991
W/P Deduster Fines Drumming	F-704	1991
W/P Pellet Packaging Hopper	V-1706C	1991
W/P Pellet Packaging	MATL-1719C	1991

Note: Some of the above equipment is shared with other polymer process paths, and therefore may have individual throughputs greater than that of the process path as a whole.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****APPLICABLE REGULATIONS:**

401 KAR 59:010, New Process Operations. (Since both new and existing process operations are present, the applicant has accepted the most stringent regulation.)

1. Operating Limitations:

See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements.**

2. Emission Limitations:

- a. Particulate matter emissions from each air pollution control device or stack shall not exceed the calculated allowable rate as determined by the following equation. [401 KAR 59:010 Section 3(2)]

$$\begin{aligned}
 E_{\text{Allowable}} &= 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr} \\
 &= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or equal to } 30 \text{ ton/hr} \\
 &= 17.31 * P^{0.16} \text{ for } P \text{ greater than } 30 \text{ ton/hr}
 \end{aligned}$$

where

$$\begin{aligned}
 E_{\text{Allowable}} &= \text{Allowable rate of particulate emissions (lbs/hr)} \\
 P &= \text{Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)}
 \end{aligned}$$

Compliance Demonstration Method:

Compliance is demonstrated based on an emission factor of 1.43 lbs PM_t/ton of material processed, a maximum batch processing rate of 0.75 tons dried/hr, and a control efficiency of 87.6%

Based on the following formula,

$$\text{PM}_t \text{ emissions (lbs/hr)} = (\text{processing rate}) * (\text{emission factor}) * (1 - \% \text{CE})$$

Where PM_t = Total Particulate Matter

the particulate emissions are less than the 401 KAR 59:010 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4.**

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

Specific Monitoring Requirements below, will be performed to indicate operation of the air pollution control equipment.

- b. Visible emissions from each air pollution control device or stack shall not equal or exceed 20% opacity on a 6-minute average basis, except as specified below. [401 KAR 59:010 Section 3(1)(a)]

The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

Weekly visual observations as specified in **4. Specific Monitoring Requirements** and **5. Specific Record Keeping Requirements** below.

3. Testing Requirements:

See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack. Observations are not required for indoor vents. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

- a. See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements**.

- b. Retain records of maintenance performed on the process equipment.

- c. Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.

If visible emissions are observed, then the following additional records shall be retained:

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
- ii. The results of the Reference Method 9 opacity test.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****EMISSION PROCESS****POINT UNIT NAME AND DESCRIPTION****PLB****Berstorff Extruder and Pellet Packaging Polymer Process Path**

Description: Dry polymer processing and packaging. Polymer from on-site production and off-site sources can be processed.

See below for equipment list

Commenced: See below

Capacity: 1,300 lb/hr (batch average for polymer processed through this path)

01**Berstorff Extruder Process**

Controls: Fabric filters for the following equipment: V-560A, V-560B, V-1560, MATL-563, V-1401

Equipment	ID	Date Commenced
West / East / New Silo Process Collector	F-554A / F-544B / F-1554	1982 / 1982 / 1991
West / East / New Powder Silo	V-560A / V-560B / V-1560	1982 / 1982 / 1991
Process Collector for West / East Nauta Blender	F-327 / SEPR-1327	1970 / 1995
West / East Nauta Blender	V-334 / MIXR-1334	1970 / 1995
West / East / New Silo Process Collector	F-554A / F-544B / F-1554	1982 / 1982 / 1991
West / East / New Powder Silo	V-560A / V-560B / V-1560	1982 / 1982 / 1991
East Densifier Feed Process Collector	F-1401	1991
East Densifier	MATL-1563	1995
East Densifier Vertical Screw Vacuum Pump	MATL-1563-3	1995
Feed Hopper for Berstorff Extruder	V-1401	1991
Berstorff Extruder	SIZE-1401	1991
Berstorff Pellet Purge Hopper Vacuum Pump	V-1402	1991
Berstorff Extruder Pellet Dryer	J-1420	1991
Berstorff Dense Phase System (Two Hopper Syst)	TK-1708A	1991
Berstorff Pellet Receiver / Deduster	1709A	1991
Berstorff Deduster Fines Drumming	F-1712	1991
Berstorff Pellett Packaging Hopper	V-1706A	1991
Berstorff Pellet Packaging	MATL-1719A	1991

Note: Some of the above equipment is shared with other polymer process paths, therefore may have individual throughputs greater than that of the process path as a whole.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****APPLICABLE REGULATIONS:**

401 KAR 59:010, New Process Operations. (Since both new and existing process operations are present, the applicant has accepted the most stringent regulation.)

1. Operating Limitations:

See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements.**

2. Emission Limitations:

- a. Particulate matter emissions from each air pollution control device or stack shall not exceed the calculated allowable rate as determined by the following equation. [401 KAR 59:010 Section 3(2)]

$$\begin{aligned} E_{\text{Allowable}} &= 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr} \\ &= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or} \\ &\quad \text{equal to } 30 \text{ ton/hr} \\ &= 17.31 * P^{0.16} \text{ for } P \text{ greater than } 30 \text{ ton/hr} \end{aligned}$$

where

$$E_{\text{Allowable}} = \text{Allowable rate of particulate emissions (lbs/hr)}$$

$$P = \text{Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)}$$

Compliance Demonstration Method:

Compliance is demonstrated based on an emission factor of 2.26 lbs PM_t/ton of material processed, a maximum batch processing rate of 0.65 tons dried/hr, and a control efficiency of 89.4%.

Based on the following formula,

$$\text{PM}_t \text{ emissions (lbs/hr)} = (\text{processing rate}) * (\text{emission factor}) * (1 - \% \text{CE})$$

Where PM_t = Total Particulate Matter

%CE = Control Efficiency

the particulate emissions are less than the 401 KAR 59:010 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4.**

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

Specific Monitoring Requirements below, will be performed to indicate operation of the air pollution control equipment.

- b. Visible emissions from each air pollution control device or stack shall not equal or exceed 20% opacity on a 6-minute average basis, except as specified below. [401 KAR 59:010 Section 3(1)(a)]
 - i. The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

Weekly visual observations as specified in **4. Specific Monitoring Requirements** and **5. Specific Record Keeping Requirements** below.

3. Testing Requirements:

See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack. Observations are not required for indoor vents. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

- a. See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements**.

- b. Retain records of maintenance performed on the process equipment.

- c. Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.

If visible emissions are observed, then the following additional records shall be retained:

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
- ii. The results of the Reference Method 9 opacity test.

6. Specific Reporting Requirements:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****EMISSION PROCESS****POINT UNIT NAME AND DESCRIPTION****PLC****Milled Powder Polymer Process Path 1**

Description: Dry polymer processing and packaging
See below for equipment list

Commenced: See below

Capacity: 1,500 lb/hr (batch average for polymer processed through this path)

01**Milled Powder Process**

Controls: Fabric filters for the following equipment:
V-560A, V-560B, V-1560, V-561, and V-366. The milled powder packaging (--) vents back to the process collector

Equipment	ID	Date Commenced
West / East / New Silo Process Collector	F-554A / F-544B / F-1554	1982 / 1982 / 1991
West / East / New Powder Silo	V-560A / V-560B / V-1560	1982 / 1982 / 1991
Process Collector for Airmill Feed Hopper	F-555	1982
Air Mill Feed Hopper	V-561	1982
Air Mill	SIZR-590A	2006
Milled Powder Process Collector	F-557	1982
Milled Powder Packaging Hopper	V-366	1982
Milled Powder Packaging	MATL-1251	1982

Note: Some of the above equipment is shared with other polymer process paths, and therefore may have individual throughputs greater than that of the process path as a whole.

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations. (Since both new and existing process operations are present, the applicant has accepted the most stringent regulation.)

1. Operating Limitations:

See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements.**

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

2. Emission Limitations:

- a. Particulate matter emissions from each air pollution control device or stack shall not exceed the calculated allowable rate as determined by the following equation. [401 KAR 59:010 Section 3(2)]

$$\begin{aligned}
 E_{\text{Allowable}} &= 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr} \\
 &= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or equal to } 30 \text{ ton/hr} \\
 &= 17.31 * P^{0.16} \text{ for } P \text{ greater than } 30 \text{ ton/hr}
 \end{aligned}$$

where

$$E_{\text{Allowable}} = \text{Allowable rate of particulate emissions (lbs/hr)}$$

$$P = \text{Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)}$$

Compliance Demonstration Method:

Compliance is demonstrated based on an emission factor of 2.04 lbs PM_t/ton of material processed, a maximum batch processing rate of 0.75 tons dried/hr, and a control efficiency of 86.5%

Based on the following formula,

$$\text{PM}_t \text{ emissions (lbs/hr)} = (\text{processing rate}) * (\text{emission factor}) * (1 - \%CE)$$

Where PM_t = Total Particulate Matter

%CE = Control Efficiency

the particulate emissions are less than the 401 KAR 59:010 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4. Specific Monitoring Requirements** below, will be performed to indicate operation of the air pollution control equipment.

- b. Visible emissions from each air pollution control device or stack shall not equal or exceed 20% opacity on a 6-minute average basis, except as specified below. [401 KAR 59:010 Section 3(1)(a)]
The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

Compliance Demonstration Method:

Weekly visual observations as specified in **4. Specific Monitoring Requirements** and **5. Specific Record Keeping Requirements** below.

3. Testing Requirements:

See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack. Observations are not required for indoor vents. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

a. See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements**.

b. Retain records of maintenance performed on the process equipment.

c. Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.

If visible emissions are observed, then the following additional records shall be retained:

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
- ii. The results of the Reference Method 9 opacity test.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****EMISSION PROCESS****POINT UNIT NAME AND DESCRIPTION****PLD****Unmilled Powder Polymer Process Path**

Description: Dry polymer processing and packaging
See below for equipment list

Commenced: See below

Capacity: 2,000 lb/hr (batch average for polymer processed through this path)

01**Unmilled Powder Process**

Controls: Fabric filters for the following equipment:
V-560A, V-560B, and V-1560. The unground powder packaging (--) vents back to the process collector

Equipment	ID	Date Commenced
West / East / New Silo Process Collector	F-554A / F-544B / F-1554	1982 / 1982 / 1991
West / East / New Powder Silo	V-560A / V-560B / V-1560	1982 / 1982 / 1991
Process Collector for West / East Nauta Blender	F-327 / SEPR-1327	1970 / 1995
West / East Nauta Blender	V-334 / MIXR-1334	1970 / 1995
Process Collector for Unmilled Powder Packaging Hopper	F-319	1967
Unmilled Powder Packaging Hopper	V-445	1967
Unmilled Powder Packaging	MATL-0008	1967

Note: Some of the above equipment is shared with other polymer process paths, and therefore may have individual throughputs greater than that of the process path as a whole.

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations. (Since both new and existing process operations are present, the applicant has accepted the most stringent regulation.)

1. Operating Limitations:

See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements.**

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****2. Emission Limitations:**

- a. Particulate matter emissions from each air pollution control device or stack shall not exceed the calculated allowable rate as determined by the following equation. [401 KAR 59:010 Section 3(2)]

$$\begin{aligned} E_{\text{Allowable}} &= 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr} \\ &= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or} \\ &\quad \text{equal to } 30 \text{ ton/hr} \\ &= 17.31 * P^{0.16} \text{ for } P \text{ greater than } 30 \text{ ton/hr} \end{aligned}$$

where

$$\begin{aligned} E_{\text{Allowable}} &= \text{Allowable rate of particulate emissions (lbs/hr)} \\ P &= \text{Process weight rate (tons/hr), equal to the total process} \\ &\quad \text{weight for a period that covers a complete batch operation} \\ &\quad \text{(tons/batch) divided by the hours of actual process} \\ &\quad \text{operation during the batch operation (hrs/batch)} \end{aligned}$$

Compliance Demonstration Method:

Compliance is demonstrated based on an emission factor of 0.85 lbs PM_t/ton of material processed, a maximum batch processing rate of 1.0 tons dried/hr, and a control efficiency of 79.9%.

Based on the following formula,

$$\text{PM}_t \text{ emissions (lbs/hr)} = (\text{processing rate}) * (\text{emission factor}) * (1 - \%CE)$$

Where PM_t = Total Particulate Matter

%CE = Control Efficiency

the particulate emissions are less than the 401 KAR 59:010 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4. Specific Monitoring Requirements** below, will be performed to indicate operation of the air pollution control equipment.

- b. Visible emissions from each air pollution control device or stack shall not equal or exceed 20% opacity on a 6-minute average basis, except as specified below. [401 KAR 59:010 Section 3(1)(a)]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

The opacity standard does not apply during periods of startup and shutdown.
[401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

Weekly visual observations as specified in **4. Specific Monitoring Requirements** and **5. Specific Record Keeping Requirements** below.

3. Testing Requirements:

See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack. Observations are not required for indoor vents. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

a. See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements**.

b. Retain records of maintenance performed on the process equipment.

c. Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.

If visible emissions are observed, then the following additional records shall be retained:

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
- ii. The results of the Reference Method 9 opacity test.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****EMISSION POINT PROCESS UNIT****NAME AND DESCRIPTION****PLE 01****Unmilled Bulk Polymer Process Path**Description: Dry polymer processing and packaging
See below for equipment list

Commenced: See below

Capacity: 2,000 lb/hr (batch average for polymer processed through this path)

Controls: Fabric filters for the following equipment:
V-560A, V-560B, and V-1560

Equipment	ID	Date Commenced
West / East / New Silo Process Collector	F-554A / F-544B / F-1554	1982 / 1982 / 1991
West / East / New Powder Silo	V-560A / V-560B / V-1560	1982 / 1982 / 1991
Process Collector for West / East Nauta Blender	F-327 / SEPR-1327	1970 / 1995
West / East Nauta Blender	V-334 / MIXR-1334	1970 / 1995
Process Collector for Tote/Bulk Bag Packaging Hopper	F-557	1982
Tote/Bulk Bag Packaging	M-0342C	1982
Process Collector for Unmilled Powder Packaging Hopper	F-319	1967
Unmilled Powder Packaging Hopper	V-445	1967
Unmilled Powder Packaging	MATL-0008	1967

Note: Some of the above equipment is shared with other polymer process paths, and therefore may have individual throughputs greater than that of the process path as a whole.

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations. (Since both new and existing process operations are present, the applicant has accepted the most stringent regulation.)

1. Operating Limitations:

See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements.**

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****2. Emission Limitations:**

- a. Particulate matter emissions from each air pollution control device or stack shall not exceed the calculated allowable rate as determined by the following equation. [401 KAR 59:010 Section 3(2)]

$$\begin{aligned}
 E_{\text{Allowable}} &= 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr} \\
 &= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or equal to } 30 \text{ ton/hr} \\
 &= 17.31 * P^{0.16} \text{ for } P \text{ greater than } 30 \text{ ton/hr}
 \end{aligned}$$

where

$$\begin{aligned}
 E_{\text{Allowable}} &= \text{Allowable rate of particulate emissions (lbs/hr)} \\
 P &= \text{Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)}
 \end{aligned}$$

Compliance Demonstration Method:

Compliance is demonstrated based on an emission factor of 0.96 lbs PM_t/ton of material processed, a maximum batch processing rate of 1.0 tons dried/hr, and a control efficiency of 76.4%

Based on the following formula,

$$\text{PM}_t \text{ emissions (lbs/hr)} = (\text{processing rate}) * (\text{emission factor}) * (1 - \%CE)$$

Where PM_t = Total Particulate Matter

%CE = Control Efficiency

the particulate emissions are less than the 401 KAR 59:010 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4. Specific Monitoring Requirements** below, will be performed to indicate operation of the air pollution control equipment.

- b. Visible emissions from each air pollution control device or stack shall not equal or exceed 20% opacity on a 6-minute average basis, except as specified below. [401 KAR 59:010 Section 3(1)(a)]
The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

Compliance Demonstration Method:

Weekly visual observations as specified in **4. Specific Monitoring Requirements** and **5. Specific Record Keeping Requirements** below.

3. Testing Requirements:

See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack. Observations are not required for indoor vents. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

a. See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements**.

b. Retain records of maintenance performed on the process equipment.

c. Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.

If visible emissions are observed, then the following additional records shall be retained:

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
- ii. The results of the Reference Method 9 opacity test.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****EMISSION POINT PROCESS UNIT****NAME AND DESCRIPTION****PLF 01****Bulk Bag Polymer Process Path**Description: Dry polymer processing and packaging
See below for equipment list

Commenced: See below

Capacity: 2,000 lb/hr (batch average for polymer
processed through this path)Controls: Fabric filters for the following equipment:
V-560A, V-560B, and V-1560

Equipment	ID	Date Commenced
West / East / New Silo Process Collector	F-554A / F-544B / F-1554	1982 / 1982 / 1991
West / East / New Powder Silo	V-560A / V-560B / V-1560	1982 / 1982 / 1991
Process Collector for Tote/Bulk Bag Packaging Hopper	F-557	1982
Tote/Bulk Bag Packaging	M-0342C	1982

Note: Some of the above equipment is shared with other polymer process paths, and therefore may have individual throughputs greater than that of the process path as a whole.

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations. (Since both new and existing process operations are present, the applicant has accepted the most stringent regulation.)

1. Operating Limitations:

See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements.**

2. Emission Limitations:

- a. Particulate matter emissions from each air pollution control device or stack shall not exceed the calculated allowable rate as determined by the following equation. [401 KAR 59:010 Section 3(2)]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

$$\begin{aligned} E_{\text{Allowable}} &= 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr} \\ &= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or} \\ &\quad \text{equal to } 30 \text{ ton/hr} \\ &= 17.31 * P^{0.16} \text{ for } P \text{ greater than } 30 \text{ ton/hr} \end{aligned}$$

where

$$E_{\text{Allowable}} = \text{Allowable rate of particulate emissions (lbs/hr)}$$

$$P = \text{Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)}$$

Compliance Demonstration Method:

Compliance is demonstrated based on an emission factor of 0.80 lbs PM_t/ton of material processed, a maximum batch processing rate of 1.0 tons dried/hr, and a control efficiency of 85.4%
Based on the following formula,

$$\text{PM}_t \text{ emissions (lbs/hr)} = (\text{processing rate}) * (\text{emission factor}) * (1 - \%CE)$$

Where PM_t = Total Particulate Matter

%CE = Control Efficiency

the particulate emissions are less than the 401 KAR 59:010 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4. Specific Monitoring Requirements** below, will be performed to indicate operation of the air pollution control equipment.

- b. Visible emissions from each air pollution control device or stack shall not equal or exceed 20% opacity on a 6-minute average basis, except as specified below. [401 KAR 59:010 Section 3(1)(a)]
The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

Weekly visual observations as specified in **4. Specific Monitoring Requirements** and **5. Specific Record Keeping Requirements** below.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

3. Testing Requirements:

See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack. Observations are not required for indoor vents. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

a. See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements**.

b. Retain records of maintenance performed on the process equipment.

c. Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.

If visible emissions are observed, then the following additional records shall be retained:

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
- ii. The results of the Reference Method 9 opacity test.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****EMISSION POINT PROCESS UNIT****NAME AND DESCRIPTION****PLG 01****Milled Powder Polymer Process Path 2**Description: Dry polymer processing and packaging
See below for equipment list

Commenced: See below

Capacity: 1,500 lb/hr (batch average for polymer processed through this path)

Controls: Fabric filters for the following equipment:
V-560A, V-560B, V-1560, V-561.
The milled powder packaging (--) vents back to the process collector

Equipment	ID	Date Commenced
West / East / New Silo Process Collector	F-554A / F-544B / F-1554	1982 / 1982 / 1991
West / East / New Powder Silo	V-560A / V-560B / V-1560	1982 / 1982 / 1991
Process Collector for Airmill Feed Hopper	F-555	1982
Air Mill Feed Hopper	V-561	1982
Air Mill	SIZR-590B	2006
Milled Powder Process Collector	SEPR-1557	2006
Milled Powder Packaging Hopper	V-1366	2006
Milled Powder Packaging	MATL-1251	2006

Note: Some of the above equipment is shared with other polymer process paths, and therefore may have individual throughputs greater than that of the process path as a whole.

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations. (Since both new and existing process operations are present, the applicant has accepted the most stringent regulation.)

1. Operating Limitations:

See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements.**

2. Emission Limitations:

- a. Particulate matter emissions from each air pollution control device or stack shall not exceed the calculated allowable rate as determined by the following equation. [401 KAR 59:010 Section 3(2)]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant**

$$\begin{aligned}
 E_{\text{Allowable}} &= 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr} \\
 &= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or equal to } 30 \text{ ton/hr} \\
 &= 17.31 * P^{0.16} \text{ for } P \text{ greater than } 30 \text{ ton/hr}
 \end{aligned}$$

where

$E_{\text{Allowable}}$ = Allowable rate of particulate emissions (lbs/hr)

P = Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)

Compliance Demonstration Method:

Compliance is demonstrated based on an emission factor of 2.04 lbs PM_t /ton of material processed, a maximum batch processing rate of 0.75 tons dried/hr, and a control efficiency of 86.5%.

Based on the following formula,

$$PM_t \text{ emissions (lbs/hr)} = (\text{processing rate}) * (\text{emission factor}) * (1 - \%CE)$$

Where PM_t = Total Particulate Matter

$\%CE$ = Control Efficiency

the particulate emissions are less than the 401 KAR 59:010 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4. Specific Monitoring Requirements** below, will be performed to indicate operation of the air pollution control equipment.

- b. Visible emissions from each air pollution control device or stack shall not equal or exceed 20% opacity on a 6-minute average basis, except as specified below. [401 KAR 59:010 Section 3(1)(a)]
The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

Weekly visual observations as specified in **4. Specific Monitoring Requirements** and **5. Specific Record Keeping Requirements** below.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

3. Testing Requirements:

See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack. Observations are not required for indoor vents. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

a. See Condition 10 of **Section D, Source Emission Limitations and Testing Requirements**.

b. Retain records of maintenance performed on the process equipment.

c. Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.

If visible emissions are observed, then the following additional records shall be retained:

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
- ii. The results of the Reference Method 9 opacity test.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Polymer Plant****EMISSION PROCESS**

POINT	UNIT	NAME AND DESCRIPTION
AJ		One HCl Storage Tank for Deionized Water Description: Horizontal tank I-TK-72 (1,274 gal) commenced ~1987
	01	Working losses Controls: Scrubber I-TK-72
	02	Breathing losses Controls: Scrubber I-TK-72

APPLICABLE REGULATIONS:

None

NON-APPLICABLE REGULATIONS:

40 CFR 63 Subpart NNNNN does not apply. Per 63.8985(a), the tank is not part of an HCl production facility because it is not associated with the production of liquid HCl product.

1. Operating Limitations:

None

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

None

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

At all times, including periods of start-up, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Polymer Plant

facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [401 KAR 50:055 Section 2 (2)(c)(5)]

8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-140s Process

K-97 PLANT / F-140s PROCESS FUTURE APPLICABLE REQUIREMENTS

APPLICABLE REGULATIONS:

- a. The existing K-97 Plant/F-140s Process shall comply with the applicable provisions of 40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP) no later than the compliance date specified in Subpart NNNNN, as updated. The compliance date is currently scheduled as April 17, 2006 per 40 CFR 63.8995(b), but may be updated by U.S. EPA. The specific emission points and specific process units, which are subject to 40 CFR 63 Subpart NNNNN requirements, shall be defined in the Notification of Compliance Status report required below.
- b. The permittee shall submit a notification of compliance status report for the K-97 Plant/F-140s Process addressing compliance with 40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP) according to the schedule in 40 CFR 63.9045.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-140s Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
80	01	K-97 HCl Absorber and Tails Tower Description: Absorber X-207 and Tails Tower T-203 Rated Capacity: N/A Commenced: 1981 Controls: Scrubber T-204

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrochloric acid (HCl) limit.

NON-APPLICABLE REGULATIONS:

The process vent provisions of 40 CFR 63 Subpart G do not apply because there are no process vents meeting the criteria specified in 40 CFR 63.107(b) through (h) within the K-97 chemical manufacturing process unit.

- Operating Limitations:**
See Conditions 3 and 6 of **SECTION D, Source Emission Limitations and Testing Requirements**.
- Emission Limitations:**
None
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
None
- Specific Record Keeping Requirements:**
None
- Specific Reporting Requirements:**
None
- Specific Control Equipment Operating Conditions:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-140s Process

8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-140s Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A13		K-97 AHF Azeotrope Column Description: AHF Azeotrope column T-202 Rated Capacity: N/A Commenced: 1991
	01	K-97 AHF Azeotrope ODS Vented to Drowning Tower Controls: None
	02	K-97 AHF Azeotrope HF Vented to Drowning Tower Controls: K-97 Drowning Tower (Scrubber) X-401
	03	K-97 AHF Azeotrope HCl Vented to Drowning Tower Controls: K-97 Drowning Tower (Scrubber) X-401

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrochloric acid (HCl) limit.

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations that produce any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate, which commenced construction, modification, or reconstruction after December 30, 1983.

The process vent provisions of 40 CFR 63 Subpart G do not apply because there are no process vents meeting the criteria specified in 40 CFR 63.107(b) through (h) within the K-97 chemical manufacturing process unit.

1. Operating Limitations:

See Conditions 3 and 6 of **SECTION D, Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-140s Process

3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Record Keeping Requirements:**
None
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
None
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-140s Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A15		K-97 Lights Column Description: Lights column T-301 Rated Capacity: N/A Commenced: 1991 Lights column can also be recycled back to the process.
	01	K-97 Lights Column Vented to Drowning Tower Controls: K-97 Drowning Tower (Scrubber) X-401
	02	K-97 Lights Column Vented to Incinerator Controls: Hazardous Waste Incinerator (EP A6) Emissions are accounted for at the incinerator emission unit
	03	K-97 Lights Column Vented to F-134a thermal oxidizer Controls: F-134a thermal oxidizer (EP Q5) Emissions are accounted for at the thermal oxidizer emission unit

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrochloric acid (HCl) limit.

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations that produce any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate, which commenced construction, modification, or reconstruction after December 30, 1983.

40 CFR 63 Subpart G, the process vent provisions do not apply because there are no process vents meeting the criteria specified in 40 CFR 63.107(b) through (h) within the K-97 chemical manufacturing process unit.

1. Operating Limitations:

See Conditions 3 and 6 of **SECTION D, Source Emission Limitations and Testing Requirements**.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-140s Process

2. **Emission Limitations:**
None
3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Record Keeping Requirements:**
None
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
None
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-140s Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A20	01	K-97/F-140s Process Wastewater Description: Wastewater Rated Capacity: N/A Commenced: 1982 Controls: None

APPLICABLE REGULATIONS:

401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart F, National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry – 40 CFR 63.105. Maintenance Wastewater Requirements.

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

NON-APPLICABLE REGULATIONS:

The process wastewater provisions of 40 CFR 63 Subpart G do not apply because there is no process wastewater as defined in 40 CFR 63.101 generated by the K-97 chemical manufacturing process unit.

1. Operating Limitations:

- a. The permittee shall prepare a Maintenance Wastewater Plan and comply with the applicable maintenance wastewater requirements specified in 40 CFR 63.105.
- b. See Conditions 3 and 6 of **SECTION D, Source Emission Limitations and Testing Requirements.**

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

The permittee shall keep records of the information required by 40 CFR 63.105 (b) and (c) as part of the Startup, Shutdown, and Malfunction Plan required by 40 CFR 63.6(e)(3). [63.105(e)].

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-140s Process

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-140s Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
FX6	01	K-97/F-140s Process CMPU Fugitive Equipment Leaks Description: Fugitive emissions Rated Capacity: N/A Commenced: 1982 - present Controls: Leak Detection and Repair for Components in Organic HAP Service

APPLICABLE REGULATIONS:

401 KAR 63:002, incorporating by reference 40 CFR 63 Subpart H, National Emission Standard for Organic Hazardous Air Pollutants for Equipment Leaks.

The provisions of 40 CFR 63 Subpart H apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or closed vent systems required by 40 CFR 63 subpart H that are intended to operate in organic hazardous air pollutant service 300 hours or more during the calendar year within the K-97 HON Chemical Manufacturing Process Units. [40 CFR 63.160(a)]

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry that commences construction or modification after January 5, 1981.

1. Operating Limitations:

- a. Each piece of equipment in a process unit to which 40 CFR 63 subpart H applies shall be identified such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 subpart H. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification. [40 CFR 63.162(c)]
- b. When each leak is detected as specified in 40 CFR 63.163 and 63.164; 63.168 and 63.169; and 63.172 through 63.174, the following requirements apply [40 CFR 63.162(f)]:
 - i. Clearly identify the leaking equipment.
 - ii. The identification on a valve may be removed after it has been monitored as specified in 40 CFR 63.168(f)(3) and 63.175(e)(7)(i)(D), and no leak has been detected during the follow-up monitoring. If the owner or operator

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-140s Process**

elects to comply using the provisions of 40 CFR 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in 40 CFR 63.174(c)(1)(i) and no leak is detected during that monitoring.

- iii. The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of 63.174(c)(1)(i), may be removed after it is repaired.

Terms that define a period of time for completion of required tasks (e.g., weekly, monthly, quarterly, annual) are specified in 40 CFR 63.162(g).

- c. In all cases where the 40 CFR 63 subpart H requires an owner or operator to repair leaks by a specified time after the leak is detected, it is a violation of 40 CFR 63 subpart H to fail to take action to repair the leaks within the specified time. If action is taken to repair the leaks within the specified time, failure of that action to successfully repair the leak is not a violation of 40 CFR 63 subpart H. However, if the repairs are unsuccessful, a leak is detected and the owner or operator shall take further action as required by applicable provisions of 40 CFR 63 subpart H. [40 CFR 63.162(h)]
- d. The provisions set forth in 40 CFR 63 Subpart H shall apply at all times except during periods of start-up or shutdown, as defined in 40 CFR 63.101(b), malfunction, process unit shutdown (as defined in 40 CFR 63.161), or non-operation of the chemical manufacturing process unit (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which 40 CFR subpart H applies. [63.102(a)(2)]

Compliance Demonstration Method:

Compliance with 40 CFR 63 Subpart H shall be determined by review of the records required by 40 CFR 63.181 and the reports required by 40 CFR 63.182, review of performance test results, and by inspections [40 CFR 63.162 (a)].

- e. See Condition 6 of **SECTION D, Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

The permittee shall comply with the fugitive emissions standards specified below, as applicable:

- a. Pumps in light liquid service [40 CFR 63.163]
- b. Compressors [40 CFR 63.164]
- c. Pressure relief devices in gas/vapor service [40 CFR 63.165]
- d. Sampling connection systems [40 CFR 63.166]
- e. Open-ended valves or lines [40 CFR 63.167]
- f. Valves in gas/vapor service and in light liquid service [40 CFR 63.168]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-140s Process**

- g. Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service [40 CFR 63.169]
- h. Surge control vessels and bottoms receivers [40 CFR 63.170]
- i. Delay of repair [40 CFR 63.171]
- j. Closed-vent systems and control devices [40 CFR 63.172]
- k. Agitators in gas/vapor service and in light liquid service [40 CFR 63.173]
- l. Connectors in gas/vapor service and in light liquid service [40 CFR 63.174]
- m. Quality improvement program for valves [40 CFR 63.175]
- n. Quality improvement program for pumps [40 CFR 63.176]
- o. Alternative means of emission limitation: General [40 CFR 63.177]
- p. Alternative means of emission limitation: Batch processes [40 CFR 63.178]
- q. Alternative means of emission limitation: Enclosed-vented process units [40 CFR 63.179]

Compliance Demonstration Method:

Compliance with 40 CFR 63 Subpart H shall be determined by review of the records required by 40 CFR 63.181 and the reports required by 40 CFR 63.182, review of performance test results, and by inspections [40 CFR 63.162 (a)].

3. Testing Requirements:

The permittee shall comply with the following applicable test methods and procedures in 40 CFR 63.180.

- a. 40 CFR 63.180 (b) Monitoring procedures, test methods and calibration procedures.
- b. 40 CFR 63.180 (c) Leak detection monitoring procedures.
- c. 40 CFR 63.180 (d) Procedures for determining organic HAP service applicability.

4. Specific Monitoring Requirements:

See 3. Testing Requirements above.

5. Specific Recordkeeping Requirements:

The permittee shall comply with the following applicable record keeping requirements in 40 CFR 63.181.

- a. An owner or operator of more than one process unit subject to the provisions of 40 CFR 63 Subpart H may comply with the recordkeeping requirements for these process units in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g. quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site. [40 CFR 63.181(a)]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-140s Process

- b. The permittee shall maintain all records required by 40 CFR 63.181 (b).
- c. For visual inspections, the permittee shall document that the inspection was conducted and the date of the inspection. These records shall be kept for a period of five years. [40 CFR 63.181 (c)]
- d. When a leak is detected, the information specified in 40 CFR 63.181 (d) shall be recorded and kept for five years.
- e. If the permittee implements any of the quality improvement programs required by 40 CFR 63.175 and 63.176, the records specified in 40 CFR 63.181 (h)(1)-(9) shall be maintained for a period of five years.
- f. For equipment in heavy liquid service, the permittee shall comply with the record keeping requirements of 40 CFR 63.181 (i) (1) – (3).
- g. For equipment designated to be in organic HAP service less than 300 hours per year, the permittee shall retain the information specified in 40 CFR 63.181 (j).

6. Specific Reporting Requirements:

The permittee shall comply with the following applicable reporting requirements in 40 CFR 63.182.

- a. 40 CFR 63.182 (a)(2), Notification of Compliance Status - The permittee has fulfilled this requirement through a December 2004 submittal.
- b. 40 CFR 63.182 (a)(3), Periodic Reports - The permittee shall submit to the Division, semiannually, the information required by 40 CFR 63.182 (d)(2). The periodic reports shall cover the periods beginning January 1st and July 1st.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
AA	01	AHF Receiving, Storage, and Handling Description: Three AHF unloading docks (#2, #3, #4): 6,000 gal/hr capacity each, commenced 1996 Three AHF storage tanks: (OV-8002, 8003, 8004): 50,000 gal capacity each, commenced 1996 One recommissioned AHF unloading dock: 6,000 gal/hr capacity, recommissioned: TBD Capacity: See above Commenced: See above Controls: Primary Scrubber (water) Secondary Scrubber (caustic)

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

The AHF Receiving, Storage, and Handling will be subject to 40 CFR 63 Subpart FFFF (National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing). The AHF Receiving, Storage, and Handling shall comply with the applicable provisions of 40 CFR 63 Subpart FFFF no later than the compliance date specified in Subpart FFFF, as updated. The specific emission points and specific process units, which are subject to 40 CFR 63 Subpart FFFF requirements, shall be defined in the Notification of Compliance Status report. The permittee shall submit a notification of compliance status report for the AHF Receiving, Storage, and Handling MCPU addressing compliance with 40 CFR 63 Subpart FFFF. Pursuant to 40 CFR 63.2520(d)(1), the report must be submitted no later than 150 days after the applicable compliance date specified in 40 CFR 63.2445.

NON-APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), is not applicable for hydrogen fluoride (HF) or any hazardous air pollutant (HAP).

1. Operating Limitations:

- a. During each unloading event, emissions shall be routed to either the water or caustic scrubber. [401 KAR 50:055 Section 2(5)]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-98 Plant

Compliance Demonstration Method:

Records shall be kept when the above listed scrubbers are not operational.

- b. See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

None

3. Testing Requirements:

The cabinet may require the owner or operator of any affected facility to sample emissions in accordance with such methods as the cabinet shall prescribe. [401 KAR 50:045 Section 1]

4. Specific Monitoring Requirements:

Upon startup of the recommissioned unloading dock, the permittee shall monitor and record the following scrubber operating parameters at least once daily:

- i. recirculation flow rate of the scrubbing liquor for each operating scrubber; and
- ii. the pH of the scrubbing liquor for the secondary (caustic) scrubber if in operation.

These parameters shall be maintained per the standard operating procedures (SOP) established by Arkema. The SOP must be made available to the Division's personnel upon request.

5. Specific Record Keeping Requirements:

See **4. Specific Monitoring Requirements** above.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

See **4. Specific Monitoring Requirements** above.

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A1		K-98 Azeotrope Column Description: Azeotrope column T-107 Capacity: NA Commenced: 1982
	01	K-98 Azeotrope ODS Vented to Drowning Tower Controls: None
	02	K-98 Azeotrope HF Vented to Drowning Tower Controls: K-98 Drowning Tower (Scrubber) X-114
	03	K-98 Azeotrope HCl Vented to Drowning Tower Controls: K-98 Drowning Tower (Scrubber) X-114
	04	K-98 Azeotrope Column Vented to F-134a TO Controls: F-134a Thermal Oxidizer (EP Q5) Emissions are accounted for at the thermal oxidizer emission unit
	05	K-98 Azeotrope Column Vented to Incinerator Controls: Hazardous Waste Incinerator (EP A6) Emissions are accounted for at the incinerator emission unit

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrochloric acid (HCl) limit.

NON-APPLICABLE REGULATIONS:

The process vent provisions of 40 CFR 63 Subpart G do not apply because there are no process vents meeting the criteria specified in 40 CFR 63.107(b) through (h) within the K-98 chemical manufacturing process unit.

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for ozone depleting substances (ODS).

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. The K-98 process unit does not produce any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate.

1. Operating Limitations:

See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

ODS vented from the K-98 azeotrope column to the drowning tower shall not exceed 10 tons during any consecutive 12 month period. [To preclude the applicability of 401 KAR 51:017, PSD, for ODS]

Compliance Demonstration Method:

Record total mass vented using flow meter. Monthly calculations of ODS emissions using flow meter data and engineering estimate of ODS composition.

3. Testing Requirements:

The cabinet may require the owner or operator of any affected facility to sample emissions in accordance with such methods as the cabinet shall prescribe. [401 KAR 50:045 Section 1]

4. Specific Monitoring Requirements:

Monitor the monthly flow vented from the K-98 azeotrope column to the drowning tower.

5. Specific Record Keeping Requirements:

- a. Records of flow meter measurements of total flow vented to drowning tower.
- b. Records of calculated monthly ODS vented to drowning tower.

6. Specific Reporting Requirements:

Submit monthly ODS vented to the drowning tower as part of the semi-annual monitoring report required under 401 KAR 52:020.

7. Specific Control Equipment Operating Conditions:

- a. Emissions from the K-98 Azeotrope Column shall be vented to either the K-98 Drowning Tower, the Thermal Oxidizer (EP Q5) or the Hazardous Waste Incinerator (EP A6) at all times the K-98 Azeotrope Column is in operation.
- b. See the control equipment operating conditions for the F-134a Thermal Oxidizer (EP Q5) and the Hazardous Waste Incinerator (EP A6).

**SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE
REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**

K-98 Plant

8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A5		K-98 AHF Azeotrope Column Description: AHF azeotrope column T-110 Capacity: NA Commenced: 1982
	01	K-98 AHF Azeotrope ODS Vented to Drowning Tower Controls: None
	02	K-98 AHF Azeotrope HF Vented to Drowning Tower Controls: K-98 Drowning Tower (Scrubber) X-114
	03	K-98 AHF Azeotrope HCl Vented to Drowning Tower Controls: K-98 Drowning Tower (Scrubber) X-114
	04	K-98 AHF Azeotrope Column Vented to F-134a Thermal Oxidizer Controls: F-134a Thermal Oxidizer (EP Q5) Emissions are accounted for at the thermal oxidizer emission unit
	05	K-98 AHF Azeotrope Column Vented to Incinerator Controls: Hazardous Waste Incinerator (EP A6) Emissions are accounted for at the incinerator emission unit

APPLICABLE REGULATIONS:

Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002.

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrochloric acid (HCl) limit.

NON-APPLICABLE REGULATIONS:

The process vent provisions of 40 CFR 63 Subpart G do not apply because there are no process vents meeting the criteria specified in 40 CFR 63.107(b) through (h) within the K-98 chemical manufacturing process unit.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for ozone depleting substances (ODS).

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. The K-98 process unit does not produce any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate.

1. Operating Limitations:

See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

- a. The permittee shall capture all point source ODS emissions from the K-98 AHF azeo column (EP A5) and achieve a destruction efficiency of 95% for the captured emissions. Fugitive emissions shall not be included in the capture requirement. The permittee shall use the existing hazardous waste incinerator (EP A6) or thermal oxidizer (EP Q5) for such control. [Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002]

Compliance Demonstration Method:

Compliance with the 95% ODS destruction efficiency for captured ODS shall be demonstrated by recording the calendar year (January 1st through December 31st) annual hours vented to the hazardous waste incinerator or thermal oxidizer, calendar year annual hours vented to the drowning tower, and calculating the calendar year average abatement using the following equation:

$$A = ((H_{\text{hwi-to}} \times 0.9999) + (H_{\text{dt}} \times 0)) / (H_{\text{hwi-to}} + H_{\text{dt}})$$

where:

A = Calendar year average abatement

$H_{\text{hwi-to}}$ = Total calendar year hours vented to either the hazardous waste incinerator or the thermal oxidizer

H_{dt} = Total calendar year hours vented to drowning tower

and

0.9999 is the hazardous waste incinerator and thermal oxidizer ODS abatement

0 is the drowning tower ODS abatement

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-98 Plant

If the calendar year average abatement (A) is 0.95 or greater, then compliance has been demonstrated.

- b. ODS vented from the K-98 AHF azeotrope to the drowning tower shall not exceed 10 tons during any consecutive 12 month period. [To preclude the applicability of 401 KAR 51:017, PSD, for ODS]

Compliance Demonstration Method:

Record total mass vented using flow meter. Monthly calculations of ODS emissions using flow meter data and engineering estimate of ODS composition.

- c. See Condition 4 (a) of **SECTION D, Source Emission Limitations and Testing Requirements.**

3. Testing Requirements:

The cabinet may require the owner or operator of any affected facility to sample emissions in accordance with such methods as the cabinet shall prescribe. [401 KAR 50:045 Section 1]

4. Specific Monitoring Requirements:

Monitor the monthly flow vented from the K-98 AHF azeotrope column to the drowning tower.

5. Specific Record Keeping Requirements:

- a. Record the calendar year annual hours vented to the hazardous waste incinerator or thermal oxidizer, and calendar year annual hours vented to the drowning tower.
- b. Record the calendar year average abatement as described under 2(a) above.
- c. Record the monthly flow meter measurements of total flow vented to drowning tower.
- d. Record the calculated monthly ODS vented to drowning tower.
- e. See Condition 4 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements.**

6. Specific Reporting Requirements:

Submit monthly ODS vented to the drowning tower as part of the semi-annual monitoring report required under 401 KAR 52:020.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-98 Plant

7. Specific Control Equipment Operating Conditions:

- a. Emissions from the K-98 AHF Azeotrope Column shall be vented to either the K-98 Drowning Tower, the Thermal Oxidizer (EP Q5) or the Hazardous Waste Incinerator (EP A6) at all times the K-98 Azeotrope Column is in operation.
- b. See the control equipment operating conditions for the F-134a Thermal Oxidizer (EP Q5) and the Hazardous Waste Incinerator (EP A6)

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A7	01	K-98 HCl Absorber and Tails Tower Description: Absorber E-115 and tails tower T-109 Capacity: NA Commenced: 2005 Controls: Scrubber X-102

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrochloric acid (HCl) limit.

This emission point is part of an existing HCl Production Facility that shall comply with the applicable provisions of 40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP) no later than the compliance date specified in Subpart NNNNN, as updated. The compliance date is currently scheduled as April 17, 2006, but may be updated by U.S. EPA. The permittee shall submit a Notification of Compliance Status report addressing compliance with 40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP) according to the schedule in 40 CFR 63.9045. The specific emission points and specific process units, which are subject to 40 CFR 63 Subpart NNNNN requirements, shall be defined in the aforementioned Notification of Compliance Status.

NON-APPLICABLE REGULATIONS:

The process vent provisions of 40 CFR 63 Subpart G do not apply because there are no process vents meeting the criteria specified in 40 CFR 63.107(b) through (h) within the K-98 chemical manufacturing process unit.

- Operating Limitations:**
See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.
- Emission Limitations:**
None
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-98 Plant

5. Specific Record Keeping Requirements:

None

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A25	01	K-98 Plant Wastewater Emissions Description: Wastewater emissions, including AWD organics removal system Capacity: NA Commenced: 1982 Controls: None

APPLICABLE REGULATIONS:

40 CFR 63 Subpart F, National Emission Standards for Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry – 40 CFR 63.105. Maintenance Wastewater Requirements.

NON-APPLICABLE REGULATIONS:

The process wastewater provisions of 40 CFR 63 Subpart G do not apply because there is no process wastewater as defined in 40 CFR 63.101 generated by the K-98 chemical manufacturing process unit.

1. Operating Limitations:

The permittee shall prepare a Maintenance Wastewater Plan and comply with the applicable maintenance wastewater requirements specified in 40 CFR 63.105.

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

The permittee shall keep records of the information required by 40 CFR 63.105 (b) as part of the Startup, Shutdown, and Malfunction Plan required by 40 CFR 63.6(e)(3). [63.105(e)]

6. Specific Reporting Requirements:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-98 Plant

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A41	01	F-141b and F-142b Dryer Dessicant Changeouts Description: Drying canister dessicant changeouts Capacity: NA Commenced: Various Controls: None

APPLICABLE REGULATIONS:

None

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:107, Prevention of Significant Deterioration of Air Quality (PSD), for ozone depleting substances (ODS)

1. Operating Limitations:

Maximum dryer dessicant changeouts shall not exceed 102 during any consecutive 12-month period. [To preclude the applicability of PSD, for ODS]

Compliance Demonstration Method:

Compliance will be demonstrated by recording the number of dessicant changeouts each month.

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

- Retain records of the number of F-141b and F-142b dryer dessicant changeouts each month.
- Calculate the rolling 12-month total F-141b and F-142b dryer dessicant changeouts.

6. Specific Reporting Requirements:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-98 Plant

7. **Specific Control Equipment Operating Conditions:**
None
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
B2		Four Methyl Chloroform (1,1,1-trichloroethane) Storage Tanks Description: Vertical fixed-roof tanks, unloaded from barge, rail, and truck: TK-101 (200,000 gal, commenced 1983) TK-101a (350,000 gal, commenced 1989) Group 1 Storage Vessels Horizontal tanks: V-105 (28,000 gal, commenced 1956) V-110 (33,000 gal, commenced 1983) Group 1 Storage Vessels Emissions from V-105 and V-110 are routed to tanks TK- 101 and TK-101a
	01	Working losses vented to F-134a thermal oxidizer Controls: Two refrigerated vent condensers (one for each tank TK-101 and TK-101a). Then to F-134a thermal oxidizer Emissions are accounted for at the thermal oxidizer emission unit
	02	Breathing losses vented to F-134a thermal oxidizer Controls: Two refrigerated vent condensers (one for each tank TK-101 and TK-101a) Then to F-134a thermal oxidizer Emissions are accounted for at the thermal oxidizer emission unit
	03	Working losses vented to carbon drum absorption system Controls: Two refrigerated vent condensers (one for each tank TK-101 and TK-101a) Then to carbon drum absorption system
	04	Breathing losses vented to carbon drum absorption system Controls: Two refrigerated vent condensers (one for each tank TK-101 and TK-101a) Then to carbon drum absorption system

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant****APPLICABLE REGULATIONS:**

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

40 CFR 63 Subpart A, F, and G: National Emission Standards for Organic Hazardous Air Pollutant Emissions from the Synthetic Organic Chemical Manufacturing Industry.

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. Methyl chloroform is not a volatile organic liquid as defined at 40 CFR 60.111b.

1. Operating Limitations:

See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

The owner or operator shall reduce hazardous air pollutant emissions to the atmosphere by operating and maintaining a closed vent system and control device in accordance with the requirements specified in 40 CFR 63.119(e), or equivalent as provided in 40 CFR 63.121 [40 CFR 63.119(a)(1)]. The owner or operator who elects to use a closed vent system and control device, as defined in 40 CFR 63.111, to comply with the requirements of 40 CFR 63.119(a)(1) shall comply with the requirements specified in 40 CFR 63.119(e)(1) through 40 CFR 63.119(e)(5) [40 CFR 63.119(e)].

- i. The control device shall be designed and operated to reduce inlet emissions of total organic HAP by 95 percent or greater. [40 CFR 63.119(e)(1)]
- ii. Periods of planned routine maintenance of control device, during which the control device does not meet the specifications of 63.119(e)(1), shall not exceed 240 hours per year. [40 CFR 63.119(e)(3)]
- iii. The specifications and requirements of 63.119(e)(1) do not apply during periods of planned routine maintenance. [40 CFR 63.119(e)(4)]
- iv. The specifications and requirements of 63.119(e)(1) do not apply during a control system malfunction. [40 CFR 63.119(e)(5)]

Compliance Demonstration Method:

- a. To demonstrate compliance with 40 CFR 63.119(e) (storage vessel equipped with a closed vent system and control device) using a control device other than a flare, the owner or operator shall comply with the requirements in 63.120 (d)(1) through (d)(7), except as provided in 63.120 (d)(8). [40 CFR 63.120 (d)]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

b. See **3. Testing Requirements** and **4. Specific Monitoring Requirements**.

3. Testing Requirements:

The owner or operator shall either maintain a design evaluation, which includes the information specified in 40 CFR 63.120(d)(1)(i), or submit the results of a performance test as described in 40 CFR 63.119(d)(1)(ii). [40 CFR 63.120(d)(1)]

4. Specific Monitoring Requirements:

- a. The owner or operator shall monitor the parameters specified in the Notification of Compliance Status required in 40 CFR 63.152(b) and shall operate and maintain the control device such that the monitored parameters remain within the ranges specified in the Notification of Compliance Status. [40 CFR 63.120d(5)]

The parameters and ranges specified in the Notification of Compliance Status are summarized below.

Thermal Oxidizer Operating Parameters

Operating Parameter	Frequency	Established Operating Limits
Temperature of combustion chamber	Continuous	2100 – 2600 °F (calendar day average)

Carbon Drum Absorption System Operating Parameters

Operating Parameter	Frequency	Permit Limit
% Removal of Methyl Chloroform	Continuous	95 % (calendar day average)

- b. Except as provided in 40 CFR 63.120d(7), each closed vent system shall be inspected as specified in 40 CFR 63.148. The initial and annual inspections required by 63.148(b) shall be done during filling of the storage vessel. [40 CFR 63.120d(6)]

5. Specific Recordkeeping Requirements:

The owner or operator shall comply with the following applicable record keeping requirements in 40 CFR 63.123 and 63.152.

- a. Records of tank dimensions and analysis showing tank capacity. [40 CFR 63.123 (a)]
- b. Records of measured values of parameters monitored, and planned routine maintenance. [40 CFR 63.123 (f)(1) and (f)(2)]
- c. Owners or operators required to keep continuous records by 40 CFR 63 Subpart G shall keep records as specified in 63.152 (f)(1) through (f)(7), except as provided in 63.152 (c)(2)(ii)(C) or in 63.152 (g). If a monitoring plan for

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

storage vessels pursuant to 40 CFR 63.120(d)(2)(i) requires continuous records, the monitoring plan shall specify which provisions, if any, of 63.152 (f)(1) through (f)(7) apply. [40 CFR 63.152 (f)]

6. Specific Reporting Requirements:

- a. The owner or operator shall demonstrate compliance with the requirements of 40 CFR 63.119(e)(3) (planned routine maintenance of a control device, during which the control device does not meet the specifications of 40 CFR 63.119 (e)(1) or (e)(2), as applicable, shall not exceed 240 hours per year) by including in each Periodic Report required by 40 CFR 63.152(c) the information specified in 40 CFR 63.122(g)(1). [40 CFR 63.120(d)(4)]
- b. The owner or operator shall comply with the applicable reporting requirements in 40 CFR 63.122 (a), (b), (c), and (g).
- c. The owner or operator shall comply with the applicable reporting requirements in 40 CFR 63.151 (a)(3) and (a)(4).
- d. The owner or operator shall comply with the applicable reporting requirements in 40 CFR 63.152 (a)(3) and (a)(4), (b), (c), and (d).
- e. Notification of Compliance Status Pursuant to HON rule – Arkema has submitted this to the Division in December 2004.

7. Specific Control Equipment Operating Conditions:

See **2. Emission Limitations** and **5. Specific Monitoring Requirements** above.

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
B6		K-98 Lights Column Description: Lights column T-108 Commenced: 2005
	01	K-98 Lights Column Vented to Drowning Tower Controls: K-98 Drowning tower (scrubber) X-114
	02	K-98 Lights Column Vented to F-134a Thermal Oxidizer Controls: F-134a Thermal Oxidizer (EP Q5) Emissions are accounted for at the thermal oxidizer emission unit
	03	K-98 Lights Column Vented to Incinerator Controls: Hazardous Waste Incinerator (EP A6) Emissions are accounted for at the incinerator emission unit

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrochloric acid (HCl) limit.

Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002.

NON-APPLICABLE REGULATIONS:

The process vent provisions of 40 CFR 63 Subpart G do not apply because there are no process vents meeting the criteria specified in 40 CFR 63.107(b) through (h) within the K-98 chemical manufacturing process unit.

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. The K-98 process unit does not produce any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-98 Plant

1. Operating Limitations:

- a. The K-98 lights column (EP B6) shall not be vented through the K-98 drowning tower in excess of 72 hours per month. [Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002]

Compliance Demonstration Method:

Records of hours vented to the drowning tower each month.

- b. See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements.**

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

- a. Records of hours vented to the drowning tower.
- b. Calculation of monthly total hours vented to the drowning tower.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

- a. Emissions from the K-98 Lights Column shall be vented to either the K-98 Drowning tower, the Thermal Oxidizer (EP Q5) or the Hazardous Waste Incinerator (EP A6) at all times the K-98 Lights Column is in operation.
- b. See the control equipment operating conditions for the F-134a Thermal Oxidizer (EP Q5) and the Hazardous Waste Incinerator (EP A6).

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
FX5		K-98 Plant CMPU Fugitive Equipment Leaks Description: Fugitive emissions Rated Capacity: N/A Commenced: 1982 - present
	01	K-98 Plant CMPU Fugitive Equipment Leaks Controls: Leak Detection and Repair for Components in Organic HAP Service

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

40 CFR 63 Subpart H: National Emission Standards for Organic Hazardous Air Pollutants for Equipment Leaks.

The provisions of 40 CFR 63 Subpart H apply to pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, surge control vessels, bottoms receivers, instrumentation systems, and control devices or closed vent systems required by subpart H that are intended to operate in organic hazardous air pollutant service 300 hours or more during the calendar year within the K-97 HON Chemical Manufacturing Process Units. [40 CFR 63.160(a)]

The components in HCl service are part of an existing HCl Production Facility that must comply with the applicable provisions of 40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP). The non-HCl service components listed above are not subject to the rule. The components in HCl service must be in compliance with Subpart NNNNN no later than the compliance date specified in Subpart NNNNN, as updated. The compliance date is currently scheduled as April 17, 2006 per 63.8995(b), but may be updated by U.S. EPA. The permittee shall submit a Notification of Compliance Status Report addressing compliance with 40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP) according to the schedule in 40 CFR 63.9045. The specific emission points and specific process units, which are subject to 40 CFR 63 Subpart NNNNN requirements, shall be defined in the aforementioned Notification of Compliance Status.

NON-APPLICABLE REGULATIONS:

40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry that commences construction or modification after January 5, 1981.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant****1. Operating Limitations:**

- a. Each piece of equipment in a process unit to which subpart H applies shall be identified such that it can be distinguished readily from equipment that is not subject to subpart H. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process unit boundaries by some form of weatherproof identification. [40 CFR 63.162(c)]
- b. When each leak is detected as specified in 63.163 and 63.164; 63.168 and 63.169; and 63.172 through 63.174, the following requirements apply [40 CFR 63.162(f)]:
 - i. Clearly identify the leaking equipment.
 - ii. The identification on a valve may be removed after it has been monitored as specified in 63.168(f)(3) and 63.175(e)(7)(i)(D), and no leak has been detected during the follow-up monitoring. If the owner or operator elects to comply using the provisions of 63.174(c)(1)(i), the identification on a connector may be removed after it is monitored as specified in 63.174(c)(1)(i) and no leak is detected during that monitoring.
 - iii. The identification which has been placed on equipment determined to have a leak, except for a valve or for a connector that is subject to the provisions of 63.174(c)(1)(i), may be removed after it is repaired.

Terms that define a period of time for completion of required tasks (e.g., weekly, monthly, quarterly, annual) are specified in 40 CFR 63.162(g).

- c. In all cases where the provisions of subpart H require an owner or operator to repair leaks by a specified time after the leak is detected, it is a violation of subpart H to fail to take action to repair the leaks within the specified time. If action is taken to repair the leaks within the specified time, failure of that action to successfully repair the leak is not a violation of subpart H. However, if the repairs are unsuccessful, a leak is detected and the owner or operator shall take further action as required by applicable provisions of subpart H. [40 CFR 63.162(h)]
- d. The provisions set forth in 40 CFR 63 Subpart H shall apply at all times except during periods of start-up or shutdown, as defined in 40 CFR 63.101(b), malfunction, process unit shutdown (as defined in 40 CFR 63.161), or non-operation of the chemical manufacturing process unit (or specific portion thereof) in which the lines are drained and depressurized resulting in cessation of the emissions to which Subpart H applies. [63.102(a)(2)]

Compliance Demonstration Method:

Compliance with 40 CFR 63 Subpart H shall be determined by review of the records required by 40 CFR 63.181 and the reports required by 40 CFR 63.182, review of performance test results, and by inspections [40 CFR 63.162 (a)].

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

- e. See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

The permittee shall comply with the fugitive emissions standards specified below, as applicable:

- a. Pumps in light liquid service [40 CFR 63.163]
- b. Compressors [40 CFR 63.164]
- c. Pressure relief devices in gas/vapor service [40 CFR 63.165]
- d. Sampling connection systems [40 CFR 63.166]
- e. Open-ended valves or lines [40 CFR 63.167]
- f. Valves in gas/vapor service and in light liquid service [40 CFR 63.168]
- g. Pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service [40 CFR 63.169]
- h. Surge control vessels and bottoms receivers [40 CFR 63.170]
- i. Delay of repair [40 CFR 63.171]
- j. Closed-vent systems and control devices [40 CFR 63.172]
- k. Agitators in gas/vapor service and in light liquid service [40 CFR 63.173]
- l. Connectors in gas/vapor service and in light liquid service [40 CFR 63.174]
- m. Quality improvement program for valves [40 CFR 63.175]
- n. Quality improvement program for pumps [40 CFR 63.176]
- o. Alternative means of emission limitation: General [40 CFR 63.177]
- p. Alternative means of emission limitation: Batch processes [40 CFR 63.178]
- q. Alternative means of emission limitation: Enclosed-vented process units [40 CFR 63.179]

Compliance Demonstration Method:

Compliance with 40 CFR 63 Subpart H shall be determined by review of the records required by 40 CFR 63.181 and the reports required by 40 CFR 63.182, review of performance test results, and by inspections. [40 CFR 63.162 (a)]

3. Testing Requirements:

See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

The permittee shall comply with the following applicable test methods and procedures in 40 CFR 63.180.

- a. 40 CFR 63.180 (b) Monitoring procedures, test methods and calibration procedures.
- b. 40 CFR 63.180 (c) Leak detection monitoring procedures.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

- c. 40 CFR 63.180 (d) Procedures for determining organic HAP service applicability.

5. Specific Recordkeeping Requirements:

The permittee shall comply with the following applicable record keeping requirements in 40 CFR 63.181.

- a. An owner or operator of more than one process unit subject to the provisions of 40 CFR 63 Subpart H may comply with the recordkeeping requirements for these process units in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g. quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site. [40 CFR 63.181(a)]
- b. The permittee shall maintain all records required by 40 CFR 63.181 (b).
- c. For visual inspections, the permittee shall document that the inspection was conducted and the date of the inspection. These records shall be kept for a period of five years. [40 CFR 63.181 (c)]
- d. When a leak is detected, the information specified in 40 CFR 63.181 (d) shall be recorded and kept for five years.
- e. If the permittee implements any of the quality improvement programs required by 40 CFR 63.175 and 63.176, the records specified in 40 CFR 63.181 (h)(1)-(9) shall be maintained for a period of five years.
- f. For equipment in heavy liquid service, the permittee shall comply with the record keeping requirements of 40 CFR 63.181 (i) (1) – (3).
- g. For equipment designated to be in organic HAP service less than 300 hours per year, the permittee shall retain the information specified in 40 CFR 63.181 (j).

6. Specific Reporting Requirements:

The permittee shall comply with the following applicable reporting requirements in 40 CFR 63.182.

- a. 40 CFR 63.182 (a)(2), Notification of Compliance Status - The permittee has fulfilled this requirement through a December 2004 submittal.
- b. 40 CFR 63.182 (a)(3), Periodic Reports - The permittee shall submit to the Division, semiannually, the information required by 40 CFR 63.182 (d)(2). The periodic reports shall cover the periods beginning January 1st and July 1st.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-98 Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
M8		K-98 Acid Stripper Description: Acid stripper T-202 Capacity: NA Commenced: 1994
	01	K-98 Acid Stripper Vented to Drowning Tower Controls: K-98 Drowning tower (scrubber) X-114
	02	K-98 Acid Stripper Vented to F-134a Thermal Oxidizer Controls: F-134a Thermal Oxidizer (EP Q5) Emissions are accounted for at the thermal oxidizer emission unit
	03	K-98 Acid Stripper Vented to Incinerator Controls: Hazardous Waste Incinerator (EP A6) Emissions are accounted for at the incinerator emission unit

APPLICABLE REGULATIONS:

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) and chlorine (Cl₂) limits.

NON-APPLICABLE REGULATIONS:

The process vent provisions of 40 CFR 63 Subpart G do not apply because there are no process vents meeting the criteria specified in 40 CFR 63.107(b) through (h) within the K-98 chemical manufacturing process unit.

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for ozone depleting substances (ODS).

1. Operating Limitations:

K-98 acid stripper venting to the drowning tower shall not exceed 1,614 hours in any consecutive 12-month period [To preclude the applicability of 401 KAR 51:017, PSD, for ODS].

Compliance Demonstration Method:

Records of hours vented to the drowning tower, and monthly calculation of 12-month total hours vented.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-98 Plant

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

- a. Records of hours vented to the drowning tower.
- b. Calculation of monthly and 12-month rolling total hours vented to the drowning tower.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

- a. Emissions from the K-98 Acid Stripper shall be vented to either the K-98 Drowning tower, the Thermal Oxidizer (EP Q5) or the Hazardous Waste Incinerator (EP A6) at all times the K-98 Acid Stripper is in operation.
- b. See the control equipment operating conditions for the F-134a Thermal Oxidizer (EP Q5) and the Hazardous Waste Incinerator (EP A6).

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

F-134A PLANT FUTURE APPLICABLE REQUIREMENTS

APPLICABLE REGULATIONS:

- a. The F-134a Plant is an existing miscellaneous organic chemical manufacturing process unit (MCPU) as defined in 40 CFR 63 Subpart FFFF (National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing). The F-134a Plant shall comply with the applicable provisions of 40 CFR 63 Subpart FFFF no later than the compliance date specified in Subpart FFFF, as updated. The specific emission points and specific process units, which are subject to 40 CFR 63 Subpart FFFF requirements, shall be defined in the Notification of Compliance Status report required below.
- b. The permittee shall submit a notification of compliance status report for the F-134a Plant MCPU addressing compliance with 40 CFR 63 Subpart FFFF. Pursuant to 40 CFR 63.2520(d)(1), the report must be submitted no later than 150 days after the applicable compliance date specified in 40 CFR 63.2445.
- c. The existing F-134a Liquid Phase and F-134a Gas Phase HCl Production Facilities shall comply with the applicable provisions of 40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP) no later than the compliance date specified in 40 CFR 63 Subpart NNNNN, as updated. The compliance date is currently scheduled as April 17, 2006 per 40 CFR 63.8995(b), but may be updated by U.S. EPA. The specific emission points and specific process units, which are subject to 40 CFR 63 Subpart NNNNN requirements, shall be defined in the Notification of Compliance Status report required below.
- d. The permittee shall submit a notification of compliance status report for the F-134a Liquid Phase and F-134a Gas Phase HCl Production Facilities addressing compliance with 40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP) according to the schedule in 40 CFR 63.9045.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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F3		Two Waste HCl Tanks
		Description: Two fixed-roof HCl storage tanks TK-6903 (20,000 gal capacity) TK-6904 (20,000 gal capacity)
		Commenced: 1995
	01	Breathing losses Controls: F-134a vent scrubber
	02	Working losses Controls: F-134a vent scrubber

APPLICABLE REGULATIONS:

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) limit.

NON-APPLICABLE REGULATIONS:

40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP). Rule does not apply because tanks contain waste HCl <30% by weight and therefore do not meet the applicability requirements.

- Operating Limitations:**
None
- Emission Limitations:**
None
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
None
- Specific Recordkeeping Requirements:**
None
- Specific Reporting Requirements:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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M9	01	F-134a Liquid Phase HCl Absorption and Tails Tower Description: Recovery of HCl from Liquid Phase HCl Column: Absorber EXCH-2404, Tails Tower T-2405 Commenced: 1995 Controls: F-134a Vent Scrubber
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APPLICABLE REGULATIONS:

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) limit.

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. The F-134a process unit does not produce any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate.

1. **Operating Limitations:**
None
2. **Emission Limitations:**
None
3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Recordkeeping Requirements:**
None
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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P1		F-134a Plant Wastewater Transfer System Description: Fugitive emissions from F-134a wastewater Commenced: 1995
	01	F-134a wastewater ODS fugitive emissions Controls: None
	02	F-134a wastewater VOC fugitive emissions Controls: None

APPLICABLE REGULATIONS:

None

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD).

1. Operating Limitations:

None

2. Emission Limitations:

See Condition 5 (a) of **SECTION D, Source Emission Limitations and Testing Requirements.**

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Recordkeeping Requirements:

See Condition 5 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements.**

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
Q1	01	F-134a Two Crude Gas Dryers Description: Regeneration of dryer beds by volatilizing absorbed water and organics DRYR-2305A and B Commenced: 1995 Controls: None

APPLICABLE REGULATIONS:

None

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD).

- Operating Limitations:**
None
- Emission Limitations:**
See Condition 5 (a) of **SECTION D, Source Emission Limitations and Testing Requirements.**
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
None
- Specific Recordkeeping Requirements:**
See Condition 5 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements.**
- Specific Reporting Requirements:**
None
- Specific Control Equipment Operating Conditions:**
None
- Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
Q3	01	F-134a Primary and Secondary Gas Phase Reactor Superheaters Description: Natural gas direct-fired super-heaters: Primary superheater FIRE-2204 (11.4 mmBtu/hr) Secondary superheater FIRE-2216 (0.7 mmBtu/hr) Commenced: 1995 Fuel: Natural Gas Controls: None

APPLICABLE REGULATIONS:

Primary superheater FIRE-2204 (11.4 mmBtu/hr):

40 CFR 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. The primary superheater is in the existing large gaseous fuel subcategory as defined in 40 CFR 63.7575, and is therefore an affected source under 40 CFR 63 Subpart DDDDD. Pursuant to 63.7506(b)(1), it is subject only to the initial notification requirements of 40 CFR 63.9(b). It is not subject to any other requirements of 40 CFR 63 Subpart DDDDD or 40 CFR 63 Subpart A. The initial notification requirement has been fulfilled.

Secondary superheater FIRE-2216 (0.7 mmBtu/hr):

40 CFR 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. The secondary superheater is in the existing small gaseous fuel subcategory as defined in 40 CFR 63.7575, and is therefore an affected source under 40 CFR 63 Subpart DDDDD. Pursuant to 40 CFR 63.7506(c)(3), it is not subject to the initial notification requirements of 40 CFR 63.9(b), and is not subject to any requirements in 40 CFR 63 Subpart DDDDD or in 40 CFR 63 Subpart A.

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD).

401 KAR 59:015, New Indirect Heat Exchangers, does not apply. The superheaters do not meet the definition of “indirect heat exchanger” in the rule since they do not use a heat transfer medium to transfer energy to its point of use.

Primary superheater FIRE-2204 (11.4 mmBtu/hr):

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Dc, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units with a heat

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

input capacity of 29 MW (100 mmBtu/hr) or less and 2.9 MW (10 mmBtu/hr) or greater which commenced construction, modification, or reconstruction after June 9, 1989. The primary superheater is a “process heater” as defined in 40 CFR 60.41c, and not a “steam generating unit” as defined in 40 CFR 60.41c. Subpart Dc does not apply to process heaters.

1. **Operating Limitations:**
None
2. **Emission Limitations:**
See Condition 5 (a) of **SECTION D, Source Emission Limitations and Testing Requirements.**
3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Recordkeeping Requirements:**
See Condition 5 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements.**
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
None
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
---------------------------	-------------------------	-----------------------------

Q5**F-134a Thermal Oxidizer, Quench Tank, and Scrubbers**

Description: Air pollution control system equipment in series:

- Thermal Oxidizer FIRE-6109
- Quench Tank V-6111
- Venturi Scrubber T-6114
- Two-Section Packed Scrubber T-6121 (caustic, water)

Fuels: Waste gas and natural gas

Capacity: 10 mmBtu/hr heat input; 6,500 lb/hr waste feed

Commenced: 1995, modified 2003

01**Natural gas combustion**

Controls: See above

02**Waste gas combustion**

Controls: See above

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) and chlorine (Cl₂) limits.**NON-APPLICABLE REGULATIONS:**

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD).

401 KAR 59:020, New Incinerators is not applicable because a thermal oxidizer burning a gas waste is not defined as an incinerator under 401 KAR 59:020.

1. Operating Limitations:

- The Thermal Oxidizer shall be operated and maintained in accordance with the most recent Operation and Maintenance Manual submitted to the Division.
- The Thermal Oxidizer shall be operated in accordance with the following conditions or the waste feed shall be immediately shut off:

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

- i. The combustion chamber temperature shall be between 2100 °F and 2600 °F at all times.
- ii. The waste gas feed rate shall be at or below 6,500 lb/hr at all times.
- iii. The stack gas CO concentration shall be less than 100 ppm, based on a one-hour rolling average.

Compliance Demonstration Method:

Monitoring and record keeping as specified in **4. Specific Monitoring Requirements** and **5. Specific Record Keeping Requirements** below.

- c. See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

See Condition 5 (a) of **SECTION D, Source Emission Limitations and Testing Requirements**.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

The permittee shall install, calibrate (as applicable), operate, and maintain the following monitoring devices and an automated data acquisition and handling system to determine compliance with the operating limitations for the Thermal Oxidizer:

- i. A thermocouple to monitor the combustion chamber temperature.
- ii. A mass flowmeter to monitor the waste feed stream mass flowrate.
- iii. A CO continuous monitoring system (CMS) to monitor the stack gas CO concentration.
- iv. The system shall take measurements at least once every 15 minutes for each operating parameter, and
- v. The system shall calculate one-hour rolling averages of the 15-minute (or shorter) measurements of stack gas CO concentration.

5. Specific Recordkeeping Requirements:

- a. The permittee shall maintain records of the following information:
 - i. All 15-minute (or shorter) measurements and one-hour rolling averages taken or calculated by the monitoring system.
 - ii. All monitoring system performance evaluations and calibration checks.
 - iii. Any preventive maintenance performed on the thermal oxidizer.
 - iv. The dates, times, and duration of each episode of any deviation from the operating limitations, including the nature and cause of the deviation and the results of any corrective action taken.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

- v. A copy of the most recent Thermal Oxidizer Operation and Maintenance manual submitted to the Division.
 - b. See Condition 5 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements**.
- 6. **Specific Reporting Requirements:**
 - a. The permittee shall submit with the Title V semiannual monitoring reports required in SECTION F of this permit the dates, times, and duration of each episode of any deviation from the operating limitations, including the nature and cause of the deviation and the results of any corrective action taken.
 - b. The permittee shall submit to the Division a copy of any revisions to the Operation and Maintenance Manual.
- 7. **Specific Control Equipment Operating Conditions:**

None
- 8. **Alternate Operating Scenarios:**

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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Q6**F-134a Lights Column**

Description: Lights column T-2309 for purification of crude F-134a

Commenced: 1995

Note: Lights column can also be recycled back to the process

01**Venting to F-134a Thermal Oxidizer**

Controls: F-134a Thermal Oxidizer (EP Q5)

Emissions are accounted for at the thermal oxidizer emission unit

02**Venting to Hazardous Waste Incinerator**

Controls: Hazardous waste incinerator (EP A6)

Emissions are accounted for at the incinerator emission unit

APPLICABLE REGULATIONS:

None

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD).

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. The F-134a process unit does not produce any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate.

1. Operating Limitations:

None

2. Emission Limitations:

See Condition 5 (a) of **SECTION D, Source Emission Limitations and Testing Requirements.**

3. Testing Requirements:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

4. Specific Monitoring Requirements:

None

5. Specific Recordkeeping Requirements:

See Condition 5 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements.**

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

The lights column shall be vented to either the Thermal Oxidizer (EP Q5), the Hazardous Waste Incinerator (EP A6), or recycled back to the process, at all times the column is in operation.

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
Q7		Two TCE (trichloroethylene) Storage Tanks Description: Two fixed-roof storage tanks for trichloroethylene unloaded from barge, rail, or truck: TK-5102 (300,000 gal), modified 1995 TK-5103 (300,000 gal), commenced 2000
01		Breathing losses vented to TCE Vent Condenser Controls: TCE Vent Condenser
02		Working losses vented to F-134a Thermal Oxidizer Controls: F-134a Thermal Oxidizer (EP Q5) Emissions are accounted for at the thermal oxidizer emission unit
03		Breathing losses vented to F-134a Thermal Oxidizer Controls: F-134a Thermal Oxidizer (EP Q5) Emissions are accounted for at the thermal oxidizer emission unit
04		Working losses vented to Hazardous Waste Incinerator Controls: Hazardous waste incinerator (EP A6) Emissions are accounted for at the incinerator emission unit
05		Breathing losses vented to Hazardous Waste Incinerator Controls: Hazardous waste incinerator (EP A6) Emissions are accounted for at the incinerator emission unit

APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD).

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant****1. Operating Limitations:**

- a. The permittee shall operate the closed vent system and control devices (F-134a Thermal Oxidizer and Hazardous Waste Incinerator) in accordance with the submitted NSPS Kb Operating Plan. [40 CFR 60.113b(c)(2)]
- b. See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

See Condition 5 (a) of **SECTION D, Source Emission Limitations and Testing Requirements**.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

The permittee shall monitor the parameters of the closed vent system and control devices (F-134a Thermal Oxidizer and Hazardous Waste Incinerator) in accordance with the submitted NSPS Kb Operating Plan, unless the plan was modified by the Division during the review process. In this case, the modified plan applies. [40 CFR 60.113b(c)(2)]

5. Specific Recordkeeping Requirements:

- a. The permittee shall keep copies of all applicable records required by 40 CFR 60.116b and 40 CFR 60.115b(c) for at least 5 years, including the following information:
 - i. A record of the measured values of the parameters monitored in accordance with the submitted NSPS Kb Operating Plan. [40 CFR 60.115b(c)(2)]
 - ii. A copy of the submitted NSPS Kb Operating Plan. [40 CFR 60.115b(c)(1)]
- b. The permittee shall keep the following information in readily accessible records for the life of the source:
 - i. The dimension of each tank and an analysis showing the capacity of each tank. [40 CFR 60.116b(b)]
- c. **See Condition 5 (b) and (c) of SECTION D, Source Emission Limitations and Testing Requirements.**

6. Specific Reporting Requirements:

The permittee shall submit an Operating Plan for approval by the Division as an attachment to the notification required by 40 CFR 60.7(a)(1). This requirement has already been fulfilled. The Operating Plan shall contain the information required by 40 CFR 60.113b(c)(1). [40 CFR 60.113b(c)(1)]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

7. Specific Control Equipment Operating Conditions:

- a. Each tank shall be equipped with a closed vent system and control device meeting the following specifications:
 - i. The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined by 40 CFR 60.485(b) [40 CFR 60.112b(a)(3)(i)]
 - ii. The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. [40 CFR 60.112b(a)(3)(ii)]
- b. Each tank shall be vented to the TCE Vent Condenser, and then to the F-134a Thermal Oxidizer (EP Q5) or Hazardous Waste Incinerator (EP A6), at all times that the tank is being filled from a barge, railcar, or tank truck.
- c. Each tank shall be vented to the TCE Vent Condenser at all times that the tank is in operation and is not vented to the F-134a Thermal Oxidizer (EP Q5) or Hazardous Waste Incinerator (EP A6).

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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Q9**F-1122 Removal Sieves**Description: Regeneration of sieves (T-2315A, T-2315B)
by volatilizing absorbed water and organics

Commenced: 1995

01 Regeneration Venting to Thermal Oxidizer

Controls: F-134a Thermal Oxidizer (EP Q5)

Emissions are accounted for at the thermal oxidizer
emission unit**02 Regeneration Venting to Hazardous Waste Incinerator**

Controls: Hazardous waste incinerator (EP A6)

Emissions are accounted for at the incinerator emission unit

APPLICABLE REGULATIONS:

401 KAR 50:012, General Application.

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD).

1. Operating Limitations:

All major air contaminant sources shall as a minimum apply control procedures that are reasonable, available, and practical. [401 KAR 50:012, Section 1(2)]

Compliance Demonstration Method:Emissions shall be controlled for the first two hours of each regeneration. Testing has shown that after two hours emissions are non-detectable. See **7. Specific Control Equipment Operating Conditions.****2. Emission Limitations:**See Condition 5 (a) of **SECTION D, Source Emission Limitations and Testing Requirements.****3. Testing Requirements:**

None

4. Specific Monitoring Requirements:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

5. Specific Recordkeeping Requirements:

See Condition 5 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements.**

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

The F-1122 removal sieves shall be vented to either the F-134a Thermal Oxidizer (EP Q5) or the Hazardous Waste Incinerator (EP A6) until emissions from the F-1122 removal sieves are non-detectable.

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
R1		F-134a Gas Phase HCl Absorption and Tails Tower Description: Recovery of HCl from Gas Phase HCl Column Absorber EXCH-6209, Tails Tower T-6207 Commenced: 1995
	01	Venting to F-134a Vent Scrubber Controls: F-134a Vent Scrubber
	02	Venting to F-134a Thermal Oxidizer Controls: F-134a Thermal Oxidizer (EP Q5) Emissions are accounted for at the thermal oxidizer emission unit
	03	Venting to Hazardous Waste Incinerator Controls: Hazardous Waste Incinerator (EP A6) Emissions are accounted for at the incinerator emission unit

APPLICABLE REGULATIONS:

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) limit.

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD).

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. The F-134a process unit does not produce any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate.

1. Operating Limitations:

None

2. Emission Limitations:

See Condition 5 (a) of **SECTION D, Source Emission Limitations and Testing Requirements**.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Recordkeeping Requirements:**
See Condition 5 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements.**
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
The F-134a Gas Phase HCl Absorption and Tails Tower shall be vented to either the F-134a Thermal Oxidizer (EP Q5), the Hazardous Waste Incinerator (EP A6), or the F-134a Vent Scrubber at all times this emission point is in operation.
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
S6	01	F-134a Plant Emergency Electric Generator Description: Electric generator to provide emergency backup electricity to the F-134a Plant Capacity: 500 kW (approximately 670 hp) Commenced: 1995 Fuel: Diesel Controls: None

APPLICABLE REGULATIONS:

40 CFR 63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE). The F-134a Plant Emergency Electric Generator is an existing emergency stationary RICE as defined in 63.6675, and is therefore an affected source under 40 CFR 63 Subpart ZZZZ as specified at 63.6590(a). Pursuant to Section 63.6590(b)(3) of Subpart ZZZZ, existing emergency stationary RICE are not subject to the requirements of 40 CFR 63 Subpart ZZZZ and 40 CFR 63 Subpart A, and no initial notification is necessary.

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD).

- Operating Limitations:**
None
- Emission Limitations:**
See Condition 5 (a) of **SECTION D, Source Emission Limitations and Testing Requirements**.
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
None
- Specific Recordkeeping Requirements:**
See Condition 5 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements**.
- Specific Reporting Requirements:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
T2		F-134a Plant Fugitive Emissions Description: Fugitive equipment leaks Commenced: Multiple
	01	F-134a Plant ODS fugitive emissions Controls: None
	02	F-134a Plant VOC fugitive emissions Controls: None
	03	F-134a Plant TCE fugitive emissions Controls: None
	04	F-134a Plant HF fugitive emissions Controls: None
	05	F-134a Plant HCl fugitive emissions Controls: None
	06	F-134a Plant Cl₂ fugitive emissions Controls: None

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl), trichloroethylene (TCE), and chlorine (Cl₂) limits.

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD).

40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. The F-134a process unit does not produce, as an intermediate or final product, a chemical listed in 40 CFR 60.489.

1. Operating Limitations:

See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

2. **Emission Limitations:**
See Condition 5 (a) of **SECTION D, Source Emission Limitations and Testing Requirements.**
3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Recordkeeping Requirements:**
See Condition 5 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements.**
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
None
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
U3		F-134a Waste Acid Clearing System and Alternate Evacuation Description: Waste clearing activities Tank V-6701: Waste acid collection tank Tank V-6703: Wastewater tank Tank V-2218: Emergency drain tank Tank V-2219: Emergency blow down tank Commenced: 1995 (V-6701/03), 2000 (V-2218/19) Note: System is vented to the F-134a vent scrubber, F-134a thermal oxidizer, hazardous waste incinerator, or recycled back to the process.
	01	ODS clearing vented to F-134a vent scrubber Controls: F-134a vent scrubber
	02	VOC clearing vented to F-134a vent scrubber Controls: F-134a vent scrubber
	03	HCl clearing vented to F-134a vent scrubber Controls: F-134a vent scrubber
	04	HF clearing vented to F-134a vent scrubber Controls: F-134a vent scrubber
	05	Cl₂ clearing vented to F-134a vent scrubber Controls: F-134a vent scrubber
	06	Clearing vented to F-134a thermal oxidizer Controls: F-134a thermal oxidizer (EP Q5) Emissions are accounted for at the thermal oxidizer emission unit
	07	Clearing vented to Hazardous Waste Incinerator Controls: Hazardous Waste Incinerator (EP A6) Emissions are accounted for at the incinerator emission unit

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) and chlorine (Cl₂) limits.

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD).

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 does not apply.

40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP). Rule does not apply because waste HCl <30% by weight and therefore do not meet the applicability requirements.

1. **Operating Limitations:**
See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**
2. **Emission Limitations:**
See Condition 5 (a) of **SECTION D, Source Emission Limitations and Testing Requirements**.
3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Recordkeeping Requirements:**
See Condition 5 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements**.
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
Tanks V-6701, 6703, 2218, and 2219 shall be vented to the F-134a vent scrubber, F-134a thermal oxidizer, the hazardous waste incinerator, or recycled back to the process, at all times they are in operation.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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U8	01	Chlorine Receiving and Storage Description: Pressurized tanks for storage of chlorine unloaded from railcar, container, or tank truck: Chlorine storage tank V-5101 Chlorine dump tank V-5103 Chlorine feed tank V-2106 Commenced: 1995 Controls: F-134a Vent Scrubber
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APPLICABLE REGULATIONS:

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide chlorine (Cl₂) limit.

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984 does not apply. Chlorine is not a volatile organic liquid as defined in 60.111b.

- Operating Limitations:**
None
- Emission Limitations:**
None
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
None
- Specific Recordkeeping Requirements:**
None
- Specific Reporting Requirements:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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U9	01	F-134a Catalyst Activation Description: Catalyst activation with nitrogen and HF Commenced: 1995 Controls: F-134a vent scrubber
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APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter Or Toxic Substances.

- Operating Limitations:**
See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**
- Emission Limitations:**
None
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
None
- Specific Recordkeeping Requirements:**
None
- Specific Reporting Requirements:**
None
- Specific Control Equipment Operating Conditions:**
Catalyst activation hydrogen fluoride (HF) emissions shall be controlled by the vent scrubber at all times the unit is in operation.
- Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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V1**F-134a Product Column**

Description: Product Column T-2311

Commenced: 1995

Note: Column is vented to the F-134a Thermal Oxidizer, Hazardous Waste Incinerator or recycled back into the process.

01 Venting to F-134a Thermal Oxidizer

Controls: F-134a Thermal Oxidizer (EP Q5)

Emissions are accounted for at the thermal oxidizer emission unit

02 Venting to Hazardous Waste Incinerator

Controls: Hazardous Waste Incinerator (EP A6)

Emissions are accounted for at the incinerator emission unit

APPLICABLE REGULATIONS:

None

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD).

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations. The F-134a process unit does not produce any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate.

1. Operating Limitations:

None

2. Emission Limitations:

See Condition 5 (a) of **SECTION D, Source Emission Limitations and Testing Requirements.**

3. Testing Requirements:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

4. Specific Monitoring Requirements:

None

5. Specific Recordkeeping Requirements:

See Condition 5 (b) and (c) of **SECTION D, Source Emission Limitations and Testing Requirements.**

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

The product column shall be vented to either the F-134a Thermal Oxidizer (EP Q5), the Hazardous Waste Incinerator (EP A6), or back into the process at all the times that the column is in operation.

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

EMISSION PROCESS

POINT	UNIT	NAME AND DESCRIPTION
U10	01	F-134a Gas Phase Catalyst Charging
		Description: Portable Charging Bin for loading solid catalyst into Gas Phase Reactors
		Capacity: 7,500 lbs catalyst/hr, 32 hours/year
		Date commenced: 1995
		Controls: Dust Collector (equip ID: SEPR-6501)

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations

1. Operating Limitations:

None

2. Emission Limitations:

- a. Particulate matter emissions shall not exceed the calculated allowable rate as determined by the following equation, except as specified below. [401 KAR 59:010 Section 3(2)]

$$E_{\text{Allowable}} = 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr}$$

$$= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or equal to } 30 \text{ ton/hr}$$

where

$$E_{\text{Allowable}} = \text{Allowable rate of particulate emissions (lbs/hr)}$$

$$P = \text{Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)}$$

Compliance Demonstration Method:

Compliance is demonstrated based on an emission factor of 0.075 lbs PM_t/lb catalyst, a maximum rate of 7500 lbs/hr, and a control efficiency of 99.9%. Based on the following formula,

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**F-134a Plant**

$$PM_t \text{ emissions (lbs/hr)} = (\text{processing rate in lbs/hr}) * (\text{emission factor in lbs } PM_t/\text{lb catalyst}) * (1 - \%CE)$$

Where: PM_t = Total Particulate Matter,
%CE = Control Efficiency

the particulate emissions are less than the 401 KAR 59:010 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4. Specific Monitoring Requirements** below, will be performed to indicate operation of the air pollution control equipment.

- b. Visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis, except as specified below. [401 KAR 59:010 Section 3(1)(a)]
 - The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

Weekly visual observations as specified in **4. Specific Monitoring Requirements** below.

- c. See Condition 5 (a) of **Section D, Source Emission Limitations and Testing Requirements**.

3. Testing Requirements:

EPA Method 9 test shall be performed if requested by the Division.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

- a. Permittee shall keep the following records for each charging event:
 - i. Quantity of catalyst used
 - ii. Date and duration of charging event
- b. Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.
If visible emissions are observed, then the following additional records shall be retained:

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

F-134a Plant

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
 - ii. The results of the Reference Method 9 opacity test.
 - c. The permittee shall maintain records sufficient to meet the requirements of conditions 5 (b) and (c) of **Section D, Source Emission Limitations and Testing Requirements**.
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
At all times, including periods of start-up, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [401 KAR 50:055 Section 2 (2)(c)(5)]
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-32 Process

K-97 PLANT / F-32 PROCESS FUTURE APPLICABLE REQUIREMENTS

APPLICABLE REGULATIONS:

- a. The K-97 Plant/F-32 Process will be subject to the existing miscellaneous organic chemical manufacturing process unit (MCPU) provisions of 40 CFR 63 Subpart FFFF (National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing). The K-97 Plant/F-32 Process shall comply with the applicable provisions of 40 CFR 63 Subpart FFFF no later than the compliance date specified in Subpart FFFF, as updated. The specific emission points and specific process units, which are subject to 40 CFR 63 Subpart FFFF requirements, shall be defined in the Notification of Compliance Status report required below.
- b. The permittee shall submit a notification of compliance status report for the K-97 Plant/F-32 Process MCPU addressing compliance with 40 CFR 63 Subpart FFFF. Pursuant to 40 CFR 63.2520(d)(1), the report must be submitted no later than 150 days after the applicable compliance date specified in 40 CFR 63.2445.
- c. The HCl recovery operations in the K-97 Plant/F-32 Process will be subject to the existing source provisions of 40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP). The K-97 Plant/F-32 Process shall comply with the applicable provisions of 40 CFR 63 Subpart NNNNN no later than the compliance date specified in Subpart NNNNN, as updated. The compliance date is currently scheduled as April 17, 2006 per 40 CFR 63.8995(b), but may be updated by U.S. EPA. The specific emission points and specific process units, which are subject to 40 CFR 63 Subpart NNNNN requirements, shall be defined in the Notification of Compliance Status report required below.
- d. The permittee shall submit a notification of compliance status report for the HCl recovery operations in the K-97 Plant/F-32 Process addressing compliance with 40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP) according to the schedule in 40 CFR 63.9045.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A12	01	K-97/F-32 Process Fugitive Emissions Description: Fugitive emissions Date commenced: 2005 Controls: HF leak detection and repair program as conditioned below. Requirements for equipment leaks specified in Table 6 of 40 CFR 63 Subpart FFFF, for equipment in organic HAP service within the K-97 Plant/F-32 Process MCPU.

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

The source has elected to accept early implementation of the existing MCPU leak detection and repair provisions of 40 CFR 63 Subpart FFFF (Miscellaneous Organic NESHAP) for organic HAP. The source will implement these provisions upon startup of the K-97 Plant/F-32 Process unit.

NON-APPLICABLE REGULATIONS:

The source has elected to implement a HF leak detection and repair program in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for hydrogen fluoride (HF).

40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry.

1. Operating Limitations:

- a. The source shall implement a HF leak detection and repair program as conditioned below [To preclude applicability of 401 KAR 51:017, PSD, for HF].
 - i. If a component in greater than 5% by weight HF service within the K-97 Plant/F-32 Process is found to be leaking, it must be repaired within 15 days. Delay of repair is allowed for leaks that cannot be repaired without a process unit shutdown, but any such leaks must be repaired during the next scheduled shutdown. A component recheck must be made within 5 days after repair. If the leak is still present or a new leak is created by the repair, further maintenance must be performed until HF emissions are no longer detectable by visual, audible, or olfactory methods.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process****Compliance Demonstration Method:**

Quarterly leak surveys and associated record keeping (See Condition 4.a of **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements** below).

- ii. Each valve located at the end of a pipe or line containing greater than 5% HF by weight must have the end of the line sealed with a second valve, a blind flange, a plug, or a cap. This sealing device may be removed only when a sample is being taken or during maintenance operations. This requirement does not apply to safety pressure relief valves. If an open-ended line is found, it must be sealed within 15 days. Delay of repair is allowed for lines that cannot be sealed without a process unit shutdown, but any such lines must be sealed during the next scheduled shutdown.

Compliance Demonstration Method:

Quarterly leak surveys and associated record keeping (See Condition 4.b of **4. Specific Monitoring Requirements** and **5. Specific Recordkeeping Requirements** below).

Any valves identified needing delay of repair shall be listed as such and shall be recorded and reported with the semiannual compliance report.

- b. Pursuant to 40 CFR 63.2480, the permittee shall comply with the applicable requirements for equipment leaks specified in Table 6 of Subpart FFFF, for equipment in organic HAP service within the F-32 MCPU. The permittee may also request approval for alternative Leak Detection and Repair operating limitations in a Pre-Compliance Report pursuant to 40 CFR 63.2520 (c)(1).

Compliance Demonstration Method:

As specified in either 40 CFR 63 Subpart UU, 40 CFR 65 Subpart F, or as approved through a Pre-Compliance Report pursuant to 40 CFR 63 Subpart FFFF, Section 63.2520.

- c. See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

- a. The permittee must perform a quarterly survey of components in greater than 5% by weight HF service in the F-32 plant. The survey shall consist of a walk

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process**

through of lines with components in greater than 5% by weight HF service. If the survey indicates visual, olfactory, or audible evidence of an HF leak, then an HF leak has been detected. "Component" means pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems which have the potential to leak HF.

- b. During the quarterly survey the permittee must also perform a visual survey for open-ended lines (valves located at the end of a pipe or line containing greater than 5% HF by weight that do not have the end of the line sealed with a second valve, a blind flange, a plug, or a cap).
- c. HF Components operating in vacuum service are excluded from monitoring requirements (a) and (b) above.
- d. Equipment that is in greater than 5% by weight HF service less than 300 hours per calendar year is excluded from monitoring requirements (a) and (b) above if it is identified (by list or location).
- e. HF components designated as unsafe-to-monitor are exempt from monitoring requirements (a) and (b) above if: 1) the owner or operator determines that the component is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements, and 2) the owner or operator has a written plan that requires monitoring of the component as frequently as practicable during safe-to-monitor times, but not more frequently than the periodic monitoring schedule otherwise applicable.
- f. HF components designated as difficult-to-monitor are exempt from monitoring requirements (a) and (b) above if: 1) the owner or operator determines that the component cannot be monitored without elevating the monitoring personnel more than 2 meters above a support surface or it is not accessible at any time in a safe manner, 2) the process unit within which the component is located is an existing source or the owner or operator designates less than 3 percent of the total number of components in a new source as difficult-to-monitor, and 3) the owner or operator follows a written plan that requires monitoring of the component at least once per calendar year.

5. Specific Record Keeping Requirements:

- a. When an HF leak is detected or an open-ended line is found, a weatherproof and readily visible tag bearing an identification number and the date of detection must be affixed to the leaking component or open-ended line. The location, tag number, date, and stream composition shall also be recorded. When the leak is repaired or the open-ended line is sealed, the date of repair and date of component recheck (for leaks only) after maintenance shall be recorded and the tag may be discarded. Records must be retained for 5 years after the survey is completed. Records must be made available to the cabinet upon request.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-32 Process

- b. Each component subject to the above HF LDAR requirements shall be identified such that it can be distinguished readily from equipment that is not subject to the HF leak detection and repair requirements. Identification of the components does not require physical tagging of the components. For example, the components may be identified on a plant site plan, in log or database entries, or by designation of boundaries by some form of weatherproof identification.
6. **Specific Reporting Requirements:**
The semi-annual monitoring report required by Section F of this permit shall include a listing of all HF leaks that were located and not repaired within the 15-day limit.
7. **Specific Control Equipment Operating Conditions:**
None
8. **Alternate Operating Scenarios:**
The permittee may submit an alternative HF leak detection and repair plan to the Division for review and approval. If approved by the Division, then the permittee may implement the alternative plan in place of the HF leak detection and repair requirements listed above. A copy of the approved alternative plan shall be retained by the permittee.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A14	01	F-32 Reactor Catalyst Conditioning Description: Catalyst conditioning with HF directed to F-32 Process HCl absorber and tails tower Date commenced: 2005 Controls: F-32 Process HCl absorber and tails tower

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

The source has elected to accept early implementation of the existing Group 1 Halogenated Process Vent provisions of 40 CFR 63 Subpart FFFF (Miscellaneous Organic NESHAP) for this vent. The source will implement these provisions upon startup of this emission point.

- Operating Limitations:**
See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements.**
- Emission Limitations:**
None
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
See **6. Specific Reporting Requirements** below.
- Specific Record Keeping Requirements:**
None
- Specific Reporting Requirements:**
 - The permittee shall submit a MON Pre-Compliance Report specifying the control device operating limits and monitoring methods for this vent, as specified in 40 CFR 63.2520(c). This Report shall be submitted not later than 60 days prior to the startup date.
 - The permittee shall submit a Notification of Compliance Status (NOCS) report for this vent under 40 CFR 63 Subpart FFFF. The NOCS shall be submitted within 150 days after startup of the vent.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-32 Process

7. **Specific Control Equipment Operating Conditions:**
See 6. Specific Reporting Requirements above.
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A16		F-32 Process HCl Recovery Description: Alumina beds, absorber, and tails tower Rated Capacity: NA Date commenced: 2005 Controls: F-32 Vent Scrubber T-9780, F-134a Thermal Oxidizer or F-32 Drowning Tower X-401
	01	F-32 Process HCl Recovery vented to Vent Scrubber then to F-134a Thermal Oxidizer (EP Q5)
	02	F-32 Process HCl Recovery vented to F-32 Vent Scrubber then to F-32 Drowning Tower
	03	F-32 Process HCl Recovery vented to F-32 Vent Scrubber then to Hazardous Waste Incinerator (EP A6)

APPLICABLE REGULATIONS:

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) limit.

- Operating Limitations:**
None
- Emission Limitations:**
None
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
None
- Specific Record Keeping Requirements:**
None
- Specific Reporting Requirements:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-32 Process

7. **Specific Control Equipment Operating Conditions:**
See F-134a Thermal Oxidizer (EP Q5) and Hazardous Waste Incinerator (EP A6) for specific requirements.
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A21		F-32 Process Non-Routine Purges and Sampling Description: Non-routine equipment purges and sampling Date commenced: 2005
	01	Vented to F-32 process drowning tower Controls: F-32 drowning tower X-401
	02	Vented directly to F-134a thermal oxidizer Controls: F-134a thermal oxidizer Emissions accounted for at F-134a thermal oxidizer
	03	Vented to F-32 scrubber, then to F-134a thermal oxidizer Controls: F-32 scrubber T-1204 F-134a thermal oxidizer Emissions accounted for at F-134a thermal oxidizer (EP Q5)
	04	Fugitives Controls: None

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) and chlorine (Cl₂) limits.

- Operating Limitations:**
See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.
- Emission Limitations:**
None
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
The F-32 process drowning tower water flow rate shall be continuously monitored.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-32 Process

5. Specific Record Keeping Requirements:

The F-32 drowning tower water flow rate shall be recorded at all times that the drowning tower is used to control emissions from purges and sampling.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

- a. See F-134a Thermal Oxidizer (EP Q5) requirements.
- b. When controlling emissions from purges and sampling, the F-32 drowning tower shall be operated with a water flow rate greater than or equal to 100 gallons per minute.

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A22		F-32 Process Purification Description: Purification columns Rated Capacity: NA Date commenced: 2005 Note: Lights column can be vented back to the process
	01	Lights Column Vented to F-32 Scrubber, then to F-32 Drowning Tower Controls: F-32 Process Scrubber T-1204 F-32 Process Drowning Tower X-401
	02	Lights Column Vented to F-134a Thermal Oxidizer or Hazardous Waste Incinerator Controls: F-134a Thermal Oxidizer (EP Q5) or Hazardous Waste Incinerator (EP A6) Emissions accounted for at the thermal oxidizer or the incinerator
	03	Product Column Vented to F-134a Thermal Oxidizer or Hazardous Waste Incinerator Controls: F-134a Thermal Oxidizer (EP Q5) or Hazardous Waste Incinerator (EP A6) Emissions accounted for at the thermal oxidizer or the incinerator

APPLICABLE REGULATIONS:

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) limit.

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart NNN, Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations that produce any of the chemicals listed in 40 CFR 60.667 as a product, co-product, by-product, or intermediate, which commenced construction, modification, or reconstruction after December 30, 1983.

1. Operating Limitations:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-32 Process

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

The F-32 process drowning tower water flow rate shall be continuously monitored.

5. Specific Record Keeping Requirements:

The F-32 drowning tower water flow rate shall be recorded at all times that the drowning tower is used to control emissions from the lights column.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

- a. See F-134a Thermal Oxidizer (EP Q5) requirements.
- b. See Hazardous Waste Incinerator (A6) requirements.
- c. When controlling emissions from the lights column, the F-32 drowning tower shall be operated with a water flow rate greater than or equal to 100 gallons per minute.

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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A23**Boiler #5**

Description: Firetube Boiler - Indirect Heat Exchanger

Primary Fuel: Natural gas

Rated Capacity: 90 mmBtu/hr

Commenced: 2005

01**Natural Gas Combustion**

Controls: Low NOx burner

APPLICABLE REGULATIONS:

401 KAR 59:015, New Indirect Heat Exchangers Constructed On or After April 9, 1972.

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Dc, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity of 29 MW (100 mmBtu/hr) or less and 2.9 MW (10 mmBtu/hr) or greater which commenced construction, modification, or reconstruction after June 9, 1989. Because the unit is fired exclusively by natural gas, only the reporting and recordkeeping requirements in 40 CFR 60.48c apply.

40 CFR 63 Subpart A, General Provisions.

40 CFR 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. Boiler #5 is a new, small gaseous fuel unit under 40 CFR 63 Subpart DDDDD. All firetube boilers, regardless of size fall into the “small” category. There are no requirements for small gaseous fuel units.

NON-APPLICABLE REGULATIONS:

The source has elected to accept annual limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for nitrogen oxides (NOx).

1. Operating Limitations:

Low NOx burners shall be installed on the boiler. [To preclude applicability of 401 KAR 51:017, PSD, for NOx]

2. Emission Limitations:

- a. When burning natural gas, particulate emissions shall not exceed 0.03 lb/mmBtu [40 CFR 60.43c (e)(1) Standard for Particulate Matter]. The PM

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-32 Process

standard apply at all times, except during periods of startup, shutdown, or malfunction. [40 CFR 60.43c (d)]

Compliance Demonstration Method:

While burning natural gas the permittee shall be deemed to be in compliance with the applicable emission standards. The permittee shall keep annual (calendar year) records of the types of fuels burned.

- b. When burning natural gas, visible emissions shall not exceed 20% opacity on a 6-minute average basis, except as follows. [401 KAR 59:015 Section 4(2)]
 - i. A maximum of 40% opacity shall be permissible for not more than 6 consecutive minutes in any 60 consecutive minute period during cleaning the fire box or blowing soot. [401 KAR 59:015, Section 4(2)(b)]
 - ii. The opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations. [401 KAR 59:015 Section 4(2)(c)]
 - iii. The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

While burning natural gas the permittee shall be deemed to be in compliance with the applicable emission standards. The permittee shall keep annual (calendar year) records of the types of fuels burned.

- c. When burning natural gas, sulfur dioxide emissions shall not exceed 0.80 lb/mmBtu on a 24-hour average basis, except as follows (based on > 250 mmBtu/hr total source heat input capacity). If necessary to demonstrate compliance, testing for periods less than the specified averaging time may be used. [401 KAR 59:015 Section 5(1)(b)]
 - i. Emissions which, due to shutdown or malfunctions, temporarily exceed the standard set forth by the cabinet shall be deemed in violation of such standards unless the requirements of 401 KAR 50:055, Sections 1(2) and 1(3) are satisfied and the Director makes the determinations specified in Section 1(4). [401 KAR 50:055 Section 1(1)]

Compliance Demonstration Method:

While burning natural gas, the permittee shall be deemed to be in compliance with the applicable emission standards. The permittee shall keep annual (calendar year) records of the types of fuels burned.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-32 Process

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

- a. Annual (calendar year) records of the types of fuel burned in the boiler.
- b. Records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative. [401 KAR 59:005 Section 3(2) and 40 CFR 60.7(b)]
- c. Records of the amounts of each fuel combusted during each day. [40 CFR 60.48c(g)]. Compliance may be demonstrated by monthly records.
- d. Maintain fuel supplier certification of the sulfur content of the fuels burned. [40 CFR 60.47c(c)]
- e. A file of all information required by 40 CFR 60 Subpart Dc and 401 KAR 59:015 recorded in a permanent form suitable for inspection. The file shall be retained for at least two years following the date of such measurements, maintenance, reports, and records. [401 KAR 59:005 Section 3(4) and 40 CFR 60.7(f)]

6. Specific Reporting Requirements:

As required by 40 CFR 60.48c(a) and 401 KAR 59:005 Section 3(1)(a)-(d), the permittee shall submit the following notifications:

- i. A notification of the date that construction, reconstruction or modification of Boiler #5 is commenced postmarked no later than thirty days after such date.
- ii. A notification of the anticipated date of initial startup of Boiler #5 postmarked not more than sixty days nor less than thirty days prior to such date.
- iii. A notification of the actual date of initial startup of Boiler #5 postmarked within fifteen days after such date.

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
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A24	01	Process Heater for F-32 Reactor Description: Direct-Fired Process Heater E-1104 Fuel: Natural gas Rated Capacity: 12 mmBtu/hr Commenced: 2005 Controls: None
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APPLICABLE REGULATIONS:

40 CFR 63 Subpart A, General Provisions.

40 CFR 63 Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters. The F-32 Process Heater is a new, large gaseous fuel unit under 40 CFR 63 Subpart DDDDD.

NON-APPLICABLE REGULATIONS:

401 KAR 59:015, New Indirect Heat Exchangers Constructed On or After April 9, 1972 does not apply. The heater does not meet the definition of “indirect heat exchanger” specified at 59:015 Section 2(2) because the unit does not use a heat transfer medium to transfer energy to its point of usage.

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart Dc, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units with a heat input capacity of 29 MW (100 mmBtu/hr) or less and 2.9 MW (10 mmBtu/hr) or greater which commenced construction, modification, or reconstruction after June 9, 1989 does not apply. The unit is a “process heater” as defined in 40 CFR 60.41c, and not a “steam generating unit” as defined in 40 CFR 60.41c.

1. Operating Limitations:

- a. The permittee shall always operate and maintain the affected source, including air pollution control and monitoring equipment, according to the provisions in 40 CFR 63.6(e)(1)(i). [40 CFR 63.7505 (b)]
- b. The permittee shall develop and implement a written startup, shutdown, and malfunction plan (SSMP) for the applicable emission limit or work practice standard in accordance with the provisions in 40 CFR 63.6(e)(3). [40 CFR 63.7505 (e)]
- c. The permittee shall follow Table 10 to 40 CFR 63 Subpart DDDDD that shows which parts of the General Provisions in 40 CFR 63.1 through 63.15 apply to this affected facility. [40 CFR 63.7565]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process****2. Emission Limitations:**

- a. The permittee must meet each emission limit and work practice standard in Table 1 to this subpart that applies to the boiler or process heater, except as provided under 40 CFR 63.7507. [40 CFR 63.7500 (a)(1)]

Carbon Monoxide 400 ppm by volume on a dry basis corrected to 3 percent oxygen (3-run average for units less than 100 mmBtu/hr).

Compliance Demonstration Method:

The permittee must demonstrate initial compliance with each emission limit and work practice standard that applies by conducting initial performance tests, according to 40 CFR 63.7520(c), and Table 5 to 40 CFR 63 Subpart DDDDD. [40 CFR 63.7530(a)]

- b. The permittee must be in compliance with the emission limits (including operating limits) and the work practice standards in 40 CFR 63 Subpart DDDDD at all times, except during periods of startup, shutdown, and malfunction. [40 CFR 63.7505 (a)]

3. Testing Requirements:

- a. The permittee shall demonstrate initial compliance with the promulgated emission limits and work practice standards no later than 180 days after startup of the source. [40 CFR 63.7510(g)]
- b. An annual performance tests for carbon monoxide according to 40 CFR 63.7520 shall be conducted. Each annual performance test must be conducted between 10 and 12 months after the previous performance test. [40 CFR 63.7515(e)]
- c. The permittee must report the results of performance tests and fuel analyses within 60 days after the completion of the performance tests or fuel analyses. The reports for all subsequent performance tests and fuel analyses should include all applicable information required in 40 CFR 63.7550. [40 CFR 63.7515(g)]
- d. The permittee must conduct all performance tests according to 40 CFR 63.7(c), (d), (f), and (h). The permittee must also develop a site-specific test plan according to the requirements in 40 CFR 63.7(c) if demonstration of compliance through performance testing is elected. [40 CFR 63.7520(a)]
- e. The permittee must conduct each performance test according to the requirements in Table 5 to 40 CFR 63 Subpart DDDDD. [40 CFR 63.7520(b)]
- f. The permittee must conduct each performance test under the specific conditions listed in Tables 5 and 7 to 40 CFR 63 Subpart DDDDD. [40 CFR 63.7520(d)]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process**

- g. The permittee may not conduct performance tests during periods of startup, shutdown, or malfunction. [40 CFR 63.7520(e)]
- h. The permittee must conduct three separate test runs for each performance test required in 40 CFR 63.7520, as specified in 40 CFR 63.7(e)(3). Each test run must last at least 1 hour. [40 CFR 63.7520(f)]

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

- a. The permittee must keep records according to 40 CFR 63.7555 (a)(1) through (3).
 - i. A copy of each notification and report that was submitted to comply with 40 CFR 63 Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that you submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv).
 - ii. The records in 40 CFR 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.
 - iii. Records of performance tests, fuel analyses, or other compliance demonstrations, performance evaluations, and opacity observations as required in 40 CFR 63.10(b)(2)(viii). [40 CFR 63.7555 (a)]
- b. The permittee must keep records of monthly fuel use by each boiler or process heater, including the type(s) of fuel and amount(s) used. [40 CFR 63.7555 (d)]
- c. The records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). [40 CFR 63.7560 (a)]
- d. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63.7560 (b)]
- e. The permittee must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The permittee can keep the records off site for the remaining 3 years. [40 CFR 63.7560 (c)]

6. Specific Reporting Requirements:

- a. The permittee must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 CFR 63.7545(e). [40 CFR 63.7530(e)]
- b. The permittee must report each instance in which the permittee did not meet each emission limit, operating limit, and work practice standard in Tables 1 through 4 to 40 CFR 63 Subpart DDDDD that apply. The permittee must also report each instance during a startup, shutdown, or malfunction when the permittee did not meet each applicable emission limit, operating limit, and

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process**

work practice standard. These instances are deviations from the emission limits and work practice standards in 40 CFR 63 Subpart DDDDD. These deviations must be reported according to the requirements in 40 CFR 63.7550. [40 CFR 63.7540(b)]

- c. During periods of startup, shutdown, and malfunction, the permittee must operate in accordance with the SSMP as required in 40 CFR 63.7505(e). [40 CFR 63.7540(c)]
- d. Consistent with 40 CFR 63.6(e) and 40 CFR 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if the permittee demonstrates to the Administrator's satisfaction that the permittee was operating in accordance with SSMP. The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in 40 CFR 63.6(e). [40 CFR 63.7540(d)]
- e. The permittee must submit all of the notifications in 40 CFR 63.7(b) and (c), 40 CFR 63.8 (e), (f)(4) and (6), and 40 CFR 63.9 (b) through (h) that apply by the dates specified. [40 CFR 63.7545 (a)]
- f. As specified in 40 CFR 63.9(b)(4) and (b)(5), the permittee must submit an Initial Notification not later than 15 days after the actual date of startup of the affected source. [40 CFR 63.7545 (c)]
- g. The permittee must submit a Notification of Compliance Status according to 40 CFR 63.9(h)(2)(ii). For each initial compliance demonstration, the permittee must submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of the performance test and/or other initial compliance demonstrations according to 40 CFR 63.10(d)(2). The Notification of Compliance Status report must contain all the information specified in 40 CFR 63.7545 (e)(1) through (9), as applicable. [40 CFR 63.7545 (e)]
- h. The permittee must submit each report in Table 9 to 40 CFR 63 Subpart DDDDD that applies. [40 CFR 63.7550 (a)]
- i. Unless the Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report by the date in Table 9 to 40 CFR 63 Subpart DDDDD and according to the requirements in 40 CFR 63.7550 (b)(1) through (5). [40 CFR 63.7550 (b)]
- j. The compliance report must contain the information required in 40 CFR 63.7550 (c)(1) through (11). [40 CFR 63.7550 (c)]
- k. For each deviation from an emission limit or operating limit in this subpart and for each deviation from the requirements for work practice standards in this subpart that occurs at an affected source where the permittee is not using a CMSs to comply with that emission limit, operating limit, or work practice standard, the compliance report must contain the information in 40 CFR 63.7550 (c)(1) through (10) and the information required in 40 CFR 63.7550

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-32 Process

(d)(1) through (4). This includes periods of startup, shutdown, and malfunction. [40 CFR 63.7550 (d)]

1. Each affected source that has obtained a Title V operating permit pursuant to 40 CFR part 70 or 40 CFR part 71 must report all deviations as defined in 40 CFR 63 Subpart DDDDD in the semiannual monitoring report. If an affected source submits a compliance report pursuant to Table 9 to 40 CFR 63 Subpart DDDDD along with, or as part of, the semiannual monitoring report, and the compliance report includes all required information concerning deviations from any emission limit, operating limit, or work practice requirement in 40 CFR 63 Subpart DDDDD, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority. [40 CFR 63.7550 (f)]

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process****EMISSION PROCESS**

POINT	UNIT	NAME AND DESCRIPTION
A26	01	F-32 Gas Phase Catalyst Charging
		Description: Portable Charging Bin for loading solid catalyst into Gas Phase Reactors
		Capacity: 2,417 lbs catalyst/hr, 48 hours/year
		Date commenced: 2005
		Controls: Dust Collector (equip ID: SEPR-9980)

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations

1. Operating Limitations:

None

2. Emission Limitations:

- a. Particulate matter emissions shall not exceed the calculated allowable rate as determined by the following equation, except as specified below. [401 KAR 59:010 Section 3(2)]

$$E_{\text{Allowable}} = 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr}$$

$$= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or equal to } 30 \text{ ton/hr}$$

where

$$E_{\text{Allowable}} = \text{Allowable rate of particulate emissions (lbs/hr)}$$

$$P = \text{Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)}$$

Compliance Demonstration Method:

Compliance is demonstrated based on an emission factor of 0.075 lbs PMt/lb catalyst, a maximum rate of 2417 lbs/hr, and a control efficiency of 99.9%. Based on the following formula,

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process**

$$PM_t \text{ emissions (lbs/hr)} = (\text{processing rate in lbs/hr}) * (\text{emission factor in lbs } PM_t/\text{lb catalyst}) * (1 - \%CE)$$

Where: PM_t = Total Particulate Matter,
%CE = Control Efficiency

the particulate emissions are less than the 401 KAR 59:010 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4. Specific Monitoring Requirements** below, will be performed to indicate operation of the air pollution control equipment.

- c. Visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis, except as specified below. [401 KAR 59:010 Section 3(1)(a)]
 - The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

Weekly visual observations as specified in **4. Specific Monitoring Requirements** below.

3. Testing Requirements:

EPA Method 9 test shall be performed if requested by the Division.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

- a. Permittee shall keep the following records for each charging event:

- i. Quantity of catalyst used
- ii. Date and duration of charging event

- b. Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.

If visible emissions are observed, then the following additional records shall be retained:

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
- ii. The results of the Reference Method 9 opacity test.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

K-97 Plant / F-32 Process

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

At all times, including periods of start-up, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [401 KAR 50:055 Section 2 (2)(c)(5)]

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**K-97 Plant / F-32 Process**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A27	01	K-97/F-32 Process Wastewater Description: Wastewater Rated Capacity: N/A Commenced: 2006 Controls: None

APPLICABLE REGULATIONS:

None

1. **Operating Limitations:**
None
2. **Emission Limitations:**
None
3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Record Keeping Requirements:**
None
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
None
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

LOGISTICS, PACKAGING, AND LOADING FUTURE APPLICABLE REQUIREMENTS

APPLICABLE REGULATIONS:

- a. The existing Logistics, Packaging, and Loading HCl Production Facilities shall comply with the applicable provisions of 40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP) no later than the compliance date specified in Subpart NNNNN, as updated. The compliance date is currently scheduled as April 17, 2006 per 40 CFR 63.8995(b), but may be updated by U.S. EPA. The specific emission points and specific process units, which are subject to 40 CFR 63 Subpart NNNNN requirements, shall be defined in the Notification of Compliance Status report required below.
- b. The permittee shall submit a notification of compliance status report for the Logistics, Packaging, and Loading area addressing compliance with 40 CFR 63 Subpart NNNNN (Hydrochloric Acid Production NESHAP) according to the schedule in 40 CFR 63.9045.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

EMISSION PROCESS

POINT	UNIT	NAME AND DESCRIPTION
30		Seven HCl Product Storage Tanks Description: Vertical fixed-roof tanks: TK-1 (100,000 gal) commenced 1991 TK-2 (300,000 gal) commenced 1999 TK-3 (200,000 gal) commenced 1974 TK-4 (200,000 gal) commenced 1978 TK-5 (300,000 gal) commenced 1981 TK-6 (300,000 gal) commenced 1981 TK-7 (300,000 up to 500,000 gal) commenced 2005
	01	Working losses Controls: Five scrubbers (one for TK-1, one for TK-2, common scrubber for TK-3 and TK-4, common scrubber for TK-5 and TK-6, one for TK-7)
	02	Breathing losses Controls: Five scrubbers (one for TK-1, one for TK-2, common scrubber for TK-3 and TK-4, common scrubber for TK-5 and TK-6, one for TK-7)

APPLICABLE REGULATIONS:

See SECTION D, Source Emission Limitations and Testing Requirements for source wide hydrogen chloride (HCl) limit.

1. **Operating Limitations:**
None
2. **Emission Limitations:**
None
3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Record Keeping Requirements:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

At all times, including periods of start-up, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [401 KAR 50:055 Section 2 (2)(c)(5)]

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
87	01	Twelve HCl Railcar Docks Description: #1 - #12 HCl railcar docks Capacity: 3 railcars/day each dock Commenced: Docks #1 - #4 commenced 1981 Docks #5 - #12 commenced 2005 Controls: HCl railcar / tank truck loading scrubbers (one for docks #1-#4, one for docks #5-#12)

APPLICABLE REGULATIONS:

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) limit.

1. **Operating Limitations:**
None
2. **Emission Limitations:**
None
3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Record Keeping Requirements:**
None
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
At all times, including periods of start-up, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [401 KAR 50:055 Section 2 (2)(c)(5)]
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
88	01	Four HCl Tank Truck Docks Description: #4 - #7 HCl tank truck docks Capacity: Docks #4 and #5: 3 trucks/day each dock Docks #6 and #7: 12 trucks/day each dock Commenced: Docks #4 and #5 commenced 1981 Docks #6 and #7 commenced 2005 Controls: HCl railcar / tank truck loading scrubbers

APPLICABLE REGULATIONS:

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) limit.

1. **Operating Limitations:**
None
2. **Emission Limitations:**
None
3. **Testing Requirements:**
None
4. **Specific Monitoring Requirements:**
None
5. **Specific Record Keeping Requirements:**
None
6. **Specific Reporting Requirements:**
None
7. **Specific Control Equipment Operating Conditions:**
At all times, including periods of start-up, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [401 KAR 50:055 Section 2 (2)(c)(5)]
8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
89	01	HCl Barge Dock Description: HCl barge loading dock Capacity: Approximately 12 hr/barge Commenced: Re-commissioned 2005 Controls: HCl barge loading scrubber

APPLICABLE REGULATIONS:

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) limit.

1. Operating Limitations:

None

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

None

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

At all times, including periods of start-up, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. [401 KAR 50:055 Section 2 (2)(c)(5)]

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A33		Two Forane/HCl and Six Forane Railcar Docks Description: #1 Forane / HCl railcar dock #2 Forane / HCl railcar dock #3 Forane railcar dock #4 Forane railcar dock #7 Forane railcar dock #8 Forane railcar dock #9 Forane railcar dock #10 Forane railcar dock Capacity: 2 Forane railcars/day each dock or 3 HCl railcars/day each dock (#1 and #2) Commenced: 1981
	01	HCl railcar loading at Forane docks #1 and #2 Controls: HCl railcar / tank truck loading scrubber
	02	F-141b railcar loading Controls: Loading at 25 psig or greater
	03	F-142b railcar loading with F-142b product recovery condenser Controls: None
	04	R-22 railcar transloading (loading) with R-22 product recovery condenser Controls: None
A34		Three Forane Tank Truck Docks Description: Forane tank truck scale dock #1 Forane tank truck off-scale dock Forane tank truck dock Capacity: 8 to 12 tank trucks /day (dependent on material) Commenced: 1981, modified 2002
	01	F-141b tank truck loading Controls: Loading at 35 psig or greater

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

- | | |
|-----------|---|
| 02 | F-142b tank truck loading with F-142b product recovery condenser
Controls: None |
| 03 | R-22 tank truck transloading with R-22 product recovery condenser
Controls: None |
| 04 | F-142b/F-124 blend tank truck loading
Controls: None |
| 05 | F-142b/F-22 blend tank truck loading
Controls: None |
| 06 | F-408a blend tank truck loading with blends product recovery condenser
Controls: None |
| 07 | F-409a blend tank truck loading with blends product recovery condenser
Controls: None
Note: Refrigerants that do not contain or emit VOC, ODS, or HAP are also loaded at the railcar and tank truck docks. This permit does not regulate these non-regulated refrigerants. |

APPLICABLE REGULATIONS:

Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002

401 KAR 51:017, Prevention of Significant Deterioration of air quality, BACT for ozone depleting substances (ODS).

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) limit.

NON-APPLICABLE REGULATIONS:

The transfer operation provisions of 40 CFR 63 Subpart G do not apply because there are no HON transfer operations as defined in 40 CFR 63.101 associated with the K-97 and K-98 HON chemical manufacturing process units which produce the F-141b and F-142b products.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

The source has elected to accept annual limits in order to preclude the applicability of Regulation 401 KAR 51:107, Prevention of significant deterioration of air quality (PSD), for ozone depleting substances (ODS)

1. Operating Limitations:

- a. Emissions from transloading pure R-22 into rail cars and tank trucks shall be routed to the vapor recovery system. [401 KAR 51:017, BACT limit]

Compliance Demonstration Method:

Records of events when the emissions from R-22 transloading are not vented to the vapor recovery system, as specified in **5. Specific Record Keeping Requirements** below.

- b. Total throughputs of the following refrigerants through the Forane railcar and tank truck docks (emission points A33 and A34) shall not exceed the following for any consecutive 12-month period. These limits apply to loading to and receiving from bulk containers only.

Activity	Limit million lb/yr	Basis
R-22 transloading (receiving) of pure R-22 into bulk containers	18	[401 KAR 51:017, BACT limit]
R-22 transloading (loading) of pure R-22 into bulk containers	18	[401 KAR 51:017, BACT limit]
F-124 receiving	0.5	[To preclude applicability of 401 KAR 51:017, PSD]
Blend F-408a loading into bulk containers	1	[To preclude applicability of 401 KAR 51:017, PSD]
Blend F-409a loading into bulk containers	1.3	[To preclude applicability of 401 KAR 51:017, PSD]

Compliance Demonstration Method:

Compliance will be demonstrated by recording the amount of each of the above refrigerants loaded and unloaded each month (as applicable), and performing monthly calculations of the totals for the previous 12-month period, as specified in **5. Specific Record Keeping Requirements** below.

- c. When loading F-141b to railcars, the vent of the railcar shall be connected to a self-contained pressure-regulating valve that is set to maintain a minimum pressure of 25 pounds per square inch gauge (psig). [Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading****Compliance Demonstration Method:**

Compliance will be demonstrated by recording the steady state F-141b loading pressure.

- d. When loading F-141b to trucks, the vent of the truck shall be connected to a self-contained pressure-regulating valve that is set to maintain a minimum pressure of 35 pounds per square inch gauge (psig). [To preclude applicability of 401 KAR 51:017, PSD, for ODS]

Compliance Demonstration Method:

Compliance will be demonstrated by recording the steady state F-141b loading pressure.

- e. Maximum F-141b and F-142b produced at the plant and loaded out shall not exceed the following loading limits for any consecutive 12-month period. These limits apply to the amount of F-141b and F-142b loaded out that has been produced at the plant. [To preclude applicability of 401 KAR 51:017, PSD, for ODS]

Material	Loading Limit (million lb/yr)
F-141b produced at the plant and loaded to drums	4
F-141b produced at the plant and loaded to trucks (including isos)	10
F-142b produced at the plant and loaded as F-142b/F-22 blends (i.e., the amount of F-142b in the blend). This limit applies to both bulk loading and container packaging.	4
Total F-142b produced at the plant and loaded. This limit applies to both bulk loading and container packaging.	100

Compliance Demonstration Method:

Compliance will be demonstrated by recording the amount of each of the above refrigerants loaded each month and performing monthly calculations of the totals for the previous 12-month period.

2. Emission Limitations:

F-141b emissions from loading F-141b to railcars shall not exceed six tons per year on a rolling average annual basis [Consent Decree 01-7087 between United States of America and Atofina Chemicals, Inc. entered on August 5, 2002]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading**Compliance Demonstration Method:

Compliance will be demonstrated by recording the steady state F-141b loading pressure, the amount of F-141b loaded to railcars each month, and calculating rolling average annual F-141b emissions.

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

- a. Retain records of the monthly amounts loaded and unloaded for the refrigerants listed under Condition b of **1. Operating Limitation** above.
- b. For each shift during which R-22 transloading operations occur, the following information shall be recorded:
 - i. Valve position (or controller output signal) of the vent valve on the R-22 transloading vapor recovery system.
If the valve is found open when the recording is made, the permittee shall record the following additional information:
 - ii. Whether the vapor recovery system was operating in accordance with the Standard Operating Procedure for Vapor Recovery System Vent Valve Openings;
 - iii. The cause of any improper operation; and
 - iv. Any corrective actions taken.
- c. Retain a copy of the current Standard Operating Procedure for Vapor Recovery System Vent Valve Openings.
- d. Calculate monthly the 12-month rolling total amounts loaded and unloaded for the refrigerants listed under Condition b of **1. Operating Limitations** above.
- e. When loading F-141b to rail cars and trucks, loading personnel shall record the steady state loading pressure.
- f. Retain records of the monthly amounts loaded for the refrigerants listed under Condition e of **1. Operating Limitations** above.
- g. Calculate monthly the 12-month rolling total amounts loaded for the refrigerants listed under Condition e of **1. Operating Limitations** above.
- h. Retain records of the amount of F-141b loaded to railcars each month.
- i. Calculate the rolling average annual F-141b emissions due to loading F-141b to railcars.

6. Specific Reporting Requirements:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A35	01	R-22, F-408a, and F-409a Dryers Dessicant Change-Outs Description: Emissions from changing dessicant in product dryers Commenced: 2003 Controls: None Note: The plant has other existing product dryers. This process unit is limited to the R-22, F-408a, and F-409a dryers only.

APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of Significant Deterioration of air quality, BACT for ozone depleting substances (ODS).

1. Operating Limitations:

- a. The source shall route ODS emissions from depressurizing the above refrigerant dryers to the vapor recovery system. [401 KAR 51:017, BACT limit for ODS]
- b. Equipment that has been isolated from the process and has been depressurized may be opened or vented to the atmosphere. [401 KAR 51:017, BACT limit for ODS]

Compliance Demonstration Method:

The source shall keep a record of events when the above refrigerant dryers are not depressurized to the vapor recovery system.

2. Emission Limitations:

None

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

Retain records of events when the above refrigerant dryers are not depressurized to the vapor recovery system.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
CP	01	Cylinder Painting Description: Paint booth and painting operations Capacity: 18 lb/hr paint Commenced: 2006 Controls: Filter
	02	Cylinder Painting Description: Cylinder Painting via hand (brush/roller) Capacity: 1.5 gallons/hr, 600 half-ton cylinders painted/year, 600 one-ton cylinders painted/year Commenced: 1964, recommissioned 2002 Controls: None

APPLICABLE REGULATIONS:

401 KAR 59:010, New Process Operations.

The Packaging & Loading coating process will be subject to 40 CFR 63 Subpart Mmmm, National Emissions Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products as an existing source. The permittee shall comply with the applicable provisions of 40 CFR Subpart Mmmm no later than the compliance date specified in Subpart Mmmm, as updated. The paint booth, along with an electric drying oven, shot blaster and conveying system along with all cylinder hand painting operations make up the existing coating operation. The permittee shall submit a notification of compliance status report for the Packaging and Loading coating operation addressing compliance with 40 CFR Subpart Mmmm. Pursuant to 40 CFR 63.3910, the report must be submitted no later than 30 days following the end of the initial compliance period specified in the subpart, as updated.

NON-APPLICABLE REGULATIONS:

401 KAR 59:225, New Miscellaneous Metal Parts and Products Surface Coating Operations. Potential VOC emissions are less than 20 ton/yr. Therefore, the regulation does not apply.

1. Operating Limitations:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

2. Emission Limitations:

- a. Particulate matter emissions shall not exceed the calculated allowable rate as determined by the following equation, except as specified below. [401 KAR 59:010 Section 3(2)]

$$E_{\text{Allowable}} = 2.34 \text{ lb/hr for } P \text{ less than or equal to } 0.5 \text{ ton/hr}$$

$$= 3.59 * P^{0.62} \text{ for } P \text{ greater than } 0.5 \text{ ton/hr but less than or equal to } 30 \text{ ton/hr}$$

where

$$E_{\text{Allowable}} = \text{Allowable rate of particulate emissions (lbs/hr)}$$

$$P = \text{Process weight rate (tons/hr), equal to the total process weight for a period that covers a complete batch operation (tons/batch) divided by the hours of actual process operation during the batch operation (hrs/batch)}$$

Compliance Demonstration Method:

Compliance for CP 01 is demonstrated based on an emission factor of 6.6 lbs PM_t/gallon (55% solids/paint gallon * 12 lbs/gallon of paint), a maximum rate of 1.5 gallons/hr, an applicator transfer efficiency of 85% and a control efficiency of 99%. Compliance for CP 02 is demonstrated based on an emission factor of 0 lbs PM_t/gallon (there are no PM emissions for hand painting). Based on the following formula,

$$\text{PM}_t \text{ emissions (lbs/hr)} = (\text{processing rate in gallons/hr}) * (\text{emission factor in lbs PM}_t\text{/gallon}) * (1 - \% \text{ATE}) * (1 - \% \text{CE})$$

Where: PM_t = Total Particulate Matter,
 %ATE = Applicator Transfer Efficiency, and
 %CE = Control Efficiency

the particulate emissions are less than the 401 KAR 59:010 Section 3(2) allowable emission rate. Weekly visual observations, as specified in **4. Specific Monitoring Requirements** below, will be performed to indicate operation of the air pollution control equipment.

- b. Visible emissions shall not equal or exceed 20% opacity on a 6-minute average basis, except as specified below. [401 KAR 59:010 Section 3(1)(a)]
- The opacity standard does not apply during periods of startup and shutdown. [401 KAR 50:055 Section 2(4)]

Compliance Demonstration Method:

EPA Method 9 testing if requested by the Division.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

3. Testing Requirements:

EPA Method 9 test shall be performed if requested by the Division. See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

The permittee shall perform qualitative weekly visual observations of the control device or stack of CP 01. If visible emissions are observed, then:

- i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
- ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

Retain records of the results of the weekly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.

If visible emissions are observed, then the following additional records shall be retained:

- i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
- ii. The results of the Reference Method 9 opacity test.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
84	01	Cylinder Shot Blaster, Electric Drying Oven and Conveying System Description: Emissions from coating operations (except for the paint booth, EP CP) Capacity: 50 cylinders/hr (nominal) Commenced: recomissioned 2002

APPLICABLE REGULATIONS:

The Packaging & Loading coating process will be subject to 40 CFR 63 Subpart M, National Emissions Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products as an existing source. The permittee shall comply with the applicable provisions of 40 CFR Subpart M no later than the compliance date specified in Subpart M, as updated. The paint booth, along with an electric drying oven, shot blaster and conveying system make up the existing coating operation. The permittee shall submit a notification of compliance status report for the Packaging and Loading coating operation addressing compliance with 40 CFR Subpart M. Pursuant to 40 CFR 63.3910, the report must be submitted no later than 30 days following the end of the initial compliance period specified in the subpart, as updated.

- Operating Limitations:**
None
- Emission Limitations:**
None
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
None
- Specific Record Keeping Requirements:**
None
- Specific Reporting Requirements:**
None
- Specific Control Equipment Operating Conditions:**

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
FX7		Logistics Area Fugitive Emissions Description: Fugitive equipment leaks Commenced: Multiple
	01	Logistics VOC fugitive emissions Controls: None
	02	Logistics ODS fugitive emissions Controls: None
	03	Logistics HCl fugitive emissions Controls: None

APPLICABLE REGULATIONS:

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) limit.

NON-APPLICABLE REGULATIONS:

401 KAR 60:005, incorporating by reference 40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemical Manufacturing Industry. The Logistics Area does not handle materials produced by a process unit that produces, as an intermediate or final product, a chemical listed in 40 CFR 60.489.

- Operating Limitations:**
None
- Emission Limitations:**
None
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
None
- Specific Record Keeping Requirements:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
PKA	01	Cynar/RRC Cylinder Filling Description: Twenty two stations Commenced: Installed 1964, recomissioned 2002 Control: Vapor recovery system
PKB		Standard Cylinder Evacuation and Filling Description: Six stations Commenced: Installed 1964, recomissioned 2002
	01	Standard cylinder evacuation Controls: Vapor recovery system
	02	Standard cylinder filling Controls: Vapor recovery system
PKC		Ton/Half-Ton Cylinder Evacuation and Filling Description: Six stations Commenced: Installed 1964, recomissioned 2002
	01	Ton/half-ton cylinder evacuation Controls: Vapor recovery system
	02	Ton/half-ton cylinder filling Controls: Vapor recovery system
PKD	01	Reclaim Evacuation of Cylinders Description: Reclaim evacuation Commenced: Installed 1964, recomissioned 2002 Controls: None

APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of Significant Deterioration of air quality (PSD), BACT for ozone depleting substances (ODS).

Note: Arkema has to phase-out the refrigerants addressed in 40 CFR 82 - Protection of Stratospheric Ozone.

1. Operating Limitations:

- a. The source shall route ODS emissions from cylinder evacuation and filling to the vapor recovery system. [401 KAR 51:017, BACT limit for ODS]

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

- b. ODS equipment that has been isolated from the process and has been depressurized may be opened or vented to the atmosphere so long as the total volume of containers evacuated does not exceed 153,350 ft³ in any consecutive 12-month period. [401 KAR 51:017, BACT limit for ODS]
- c. The vent valve on the vapor recovery system shall be closed except for occasional brief periods when non-condensable material is being vented from the recovery system. During these periods, the vapor recovery system shall be operated in accordance with the Standard Operating Procedure for Vapor Recovery System Vent Valve Openings required under **5. Specific Record Keeping Requirements**. [401 KAR 51:017, BACT limit for ODS]

Compliance Demonstration Method:

For refrigerants containing ODS:

- a. The source shall keep a record of events when emissions from the cylinder evacuation and filling were not vented to the vapor recovery system.
- b. Compliance shall be demonstrated by keeping records of the number of containers evacuated and filled each month, along with the total volume of containers evacuated and filled each month.

2. Emission Limitations:

Total ODS emissions from cylinder evacuation and filling shall not exceed 20.2 tons/yr, based on a 12-month rolling total.

Compliance Demonstration Method:

Monthly emissions of ODS shall be calculated and shall be used to comply with the annual limit.

For Cylinder Evacuation:

Compliance is demonstrated by tracking the total number of cylinders evacuated each month, and using the following equation to calculate emissions:

$$E = (V_{\text{Total}} \times 0.263)/2000$$

$$V_{\text{Total}} = \sum N_i V_i$$

Where:

V_{Total} = the total volume evacuated from the cylinder (ft³/month)

E = the total emissions from evacuation (ton/month)

N_i = total number of cylinders evacuated per month, for each type of container

V_i = internal volume of each type of container (ft³)

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading****For Cylinder Filling**

Compliance is demonstrated by tracking the total number of containers filled each month, and using the following equation to calculate emissions:

$$E = \Sigma [(N_i \times D_i \text{ loss}) / 2000]$$

Where:

E= the total emissions from filling (ton/month)

N_i = total number of containers filled per month, for each type of container

D_i . loss = Disconnect Loss (in lb./container), for each type of container

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Recordkeeping Requirements:

For refrigerants containing ODS, the permittee shall:

- a. Retain records of the number of cylinders evacuated and filled each month.
- b. Retain records of the total volume of cylinders evacuated each month, and the rolling 12-month total volume evacuated.
- c. Retain records of the calculated total evacuation and filling ODS emissions for each month, and the rolling 12-month total ODS emissions.
- d. For each shift during which evacuation operations occur, the following information shall be recorded:
 - i. Valve position (or controller output signal) of the vent valve on the vapor recovery system.
If the valve is found to be open when the recording is made, the permittee shall record the following additional information:
 - ii. Whether the vapor recovery system was operating in accordance with the Standard Operating Procedure for Vapor Recovery System Vent Valve Openings;
 - iii. The cause of any improper operation; and
 - iv. Any corrective actions taken.
- e. Retain a copy of the current Standard Operating Procedure for Vapor Recovery System Vent Valve Openings.

6. Specific Reporting Requirements:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
PKE	01	Packaging Area Fugitive Emissions Description: Fugitive equipment leaks Commenced: Multiple Controls: Leak detection and repair (approximately 60% control efficiency)

APPLICABLE REGULATIONS:

401 KAR 51:017, Prevention of Significant Deterioration of air quality (PSD), BACT for ozone depleting substances (ODS).

NON-APPLICABLE REGULATIONS:

401 KAR 61:175, Leaks from Existing Synthetic Organic Chemical and Polymer Manufacturing Equipment does not apply to this emission point. However, 401 KAR 61:175 was used to set up BACT for the ODS emissions. For the purposes of this permit, references to VOC in 401 KAR 61:175 shall be interpreted as applicable to ODS.

1. Operating Limitations:

- a. The source shall implement a Leak Detection and Repair (LDAR) program to detect and repair equipment leaks. The permittee shall comply with 401 KAR 61:175, which shall be the BACT requirement for fugitives. [401 KAR 51:017, BACT limit]
- b. When a leak is detected as specified in 401 KAR 61:175, Section 3(1), the procedures described in 401 KAR 61:175 Section 4(3) shall be followed to identify and repair the leak. [401 KAR 51:017, BACT limit]

Compliance Demonstration Method:

- a. As specified below, compliance with 401 KAR 61:175 shall be determined by conducting monitoring as specified in 410 KAR 61:175 Sections 4(1) and 4(2), by review of records, by performance tests, and by inspections.
- b. The source shall record any occurrence when emissions from the valves, pump seals, or connectors are not monitored quarterly with an ODS detection device.

2. Emission Limitations:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Logistics, Packaging, and Loading****3. Testing Requirements:**

- a. The permittee shall comply with the testing requirements of 401 KAR 61:175, Section 5.
- b. The alternative screening method specified in 40 CFR 60 Appendix A, Section 8.3.3 (soap solution screening) shall be an acceptable alternative monitoring method for the purpose of a component re-check after repair, and for the purpose of confirming the discovery of a leak.

4. Specific Monitoring Requirements:

- a. The permittee shall monitor and repair pumps, valves, flanges, and compressor seals for possible leaks of ODS as specified in 401 KAR 61:175, Sections 4(1) and 4(2).
- b. Noting valves in gas service as required in 401 KAR 61:175 Section 4(2) shall be satisfied by the maintenance of such information in a Fugitive Emissions Management System database available to the operator performing the monitoring and to the cabinet.
- c. In lieu of initial monitoring of a component which sight, smell, or sound indicates a possible leak as described in 401 KAR 61:175 Section 4(1)(d), the permittee can instead assume that the component is leaking, repair the leak within 5 days, and monitor with a portable detection device within 15 days to confirm the effectiveness of the repair.
- d. Monitoring of pressure relief valves as described in 401 KAR 61:175 Section 4(1)(c) is required within 15 days after it has vented to the atmosphere.

5. Specific Record Keeping Requirements:

- a. Retain records of the components monitored, any leaks detected, and repair status in accordance with 401 KAR 61:175 Section 4(3). The records shall be kept in a readily accessible location at the plant site.
- b. See **4. Specific Monitoring Requirements** above.
- c. The use of a Fugitive Emissions Management System database satisfies the 401 KAR 61:175 Section 4(3) requirement of a “survey log” and all components may be assumed to contain 100% ODS rather than recording the actual stream composition.

6. Specific Reporting Requirements:

The permittee shall comply with the reporting requirements as specified in 401 KAR 61:175 Section 4(4), with the exception that leaks that cannot be repaired within 15 days shall be repaired before the end of the next turnaround.

7. Specific Control Equipment Operating Conditions:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Logistics, Packaging, and Loading

8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Incinerator Area**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
A6		Hazardous Waste Incinerator Description: T-Thermal Single Chamber Incinerator Primary fuel: Hazardous and non-hazardous wastes Supplemental fuel: Natural Gas Capacity: 1,965 lb/hr hourly rolling average total waste feed 7.5 mmBtu/hr heat release (approximate) Commenced: 1982
	01	Waste Combustion Controls: Quench Tank Venturi Scrubber Primary Packed Scrubber Secondary Packed Scrubber Wet Electrostatic Precipitator
	02	Natural Gas Combustion Controls: Same as above

APPLICABLE REGULATIONS:

401 KAR 50:055, General Compliance Requirements.

401 KAR 59:005, General Provisions.

401 KAR 59:020, New Incinerators.

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

40 CFR 63 Subpart EEE, National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors.

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) and chlorine (Cl₂) limits.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Incinerator Area****NON-APPLICABLE REGULATIONS:**

401 KAR 59:021, New Municipal Solid Waste Incinerators does not apply because the incinerator will not combust material, which if included in the waste stream, would be municipal solid waste (household and/or commercial solid waste) per 401 KAR 59:021 Section 1(30).

40 CFR 60 Subpart Cb, Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors that are constructed on or before September 20, 1994 does not apply because the incinerator does not process more than 250 tons per day municipal solid waste (MSW).

40 CFR 60 Subpart Ce, Emissions Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators does not apply because the incinerator is not an HMIWI (hospital/medical/infectious waste incinerator) as it is defined in 40 CFR 60.51c.

40 CFR 60 Subpart E, Standards of Performance for Incinerators does not apply because the incinerator does not have a charging rate greater than 50 tons per day.

40 CFR 60 Subpart Eb, Large Municipal Waste Combustors for which construction is commenced after September 20, 1994 does not apply because the incinerator was constructed prior to 1994 and does not combust MSW.

40 CFR 61 Subpart C, National Emission Standard for Beryllium does not apply because the incinerators does not process beryllium ore, beryllium, beryllium oxide, beryllium alloys, or beryllium-containing waste.

40 CFR 61 Subpart E, National Emission Standard for Mercury does not apply because the incinerator does not incinerate wastewater treatment plant sludge.

1. Operating Limitations:

- a. The incinerator shall operate within the following established operating limits. [40 CFR 63 Subpart EEE as established in the Notification of Compliance]
 - i. If a new compliance performance test is conducted, the operating requirements specified in the Notification of Compliance will be incorporated in the Title V permit and will replace the operating limits stated below.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Incinerator Area**

Operating Parameter	Permitting Units	Established Operating Limits
Maximum Feedrate of Mercury	12-Hour Rolling Average	0.0031 lb/hr
Maximum Ash Feed Rate	12-Hour Rolling Average	21.92 lb/hr
Maximum Feed Rate of SVM (Pb, Cd)	12-Hour Rolling Average	0.4836 lb/hr
Maximum Feed Rate of LVM (As, Be, Cr)	12-Hour Rolling Average	0.2492 lb/hr
Maximum Feed Rate of Total Chlorine/Chloride	12-Hour Rolling Average	946.4 lb/hr
Minimum Combustion Chamber Temperature (measured as Flame Temp.)	HRA	2,022°F
Maximum Flue Gas Flow Rate (measured as Combustion Air Flow Rate)	HRA	1,341 scfm
Maximum Pumpable Hazardous Waste Feed Rate	HRA	1,801 lb/hr
Operation of Waste Firing System Minimum Atomizing Steam Pressure	HRA	55 psig
Minimum Pressure Drop Across Venturi Scrubber	HRA	41.3 inches of H ₂ O
Minimum Pressure Drop Across the Primary Packed Scrubber	HRA	0.20 inches of H ₂ O
Minimum Pressure Drop Across the Secondary Packed Scrubber	HRA	0.20 inches of H ₂ O
Minimum Liquid Feed Pressure to the Primary Packed Scrubber	HRA	5 psig
Minimum Liquid Feed Pressure to the Secondary Packed Scrubber	HRA	0 psig
Minimum Scrubber Water Flow Rate to the Venturi Scrubber	HRA	16.8 gpm
Minimum Scrubber Water Flow Rate for the Packed Scrubber	HRA	29.8 gpm

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Incinerator Area**

Operating Parameter	Permitting Units	Established Operating Limits
Minimum Scrubber Water Flow Rate for the Secondary Packed Scrubber	HRA	19.5 gpm
Minimum pH on Secondary Packed Scrubber	HRA	8.0
Emission Limit for Carbon Monoxide	HRA	100 ppmv corrected to 7% O ₂

Compliance Demonstration Method:

The incinerator shall be equipped with an automatic waste feed cutoff (AWFCO) system operated in accordance with 40 CFR 63.1206(c)(3).

- b. The incinerator shall be operated in accordance with the Startup, Shutdown, and Malfunction Plan required by 40 CFR 63.1206(c)(2).
- c. The incinerator shall be operated in accordance with the Operating and Maintenance Plan required by 40 CFR 63.1206(c)(7).
- d. See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

- a. The permittee shall not exceed the emission limitations specified below. [40 CFR 63.1203(a)].

HAP or HAP Surrogate	Emission Limitation ^a
Destruction and Removal Efficiency	99.99%
Dioxins/Furans	0.20 ng/dscm TEQ ^b or 0.40 ng/dscm TEQ if Temp. <400°F ^c
Particulate Matter	0.015 gr/dscf (34 mg/dscm)
Mercury	130 µg/dscm
SVM (SemiVolatile Metals) -- Cd, Pb	240 µg/dscm
LVM (Low Volatile Metals) -- As, Be, Cr,	97 µg/dscm
HCl + Cl ₂	77 ppmv

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Incinerator Area**

HAP or HAP Surrogate	Emission Limitation^a
Carbon Monoxide (CO)	100 ppmv (dry basis)
Hydrocarbons (HC)	10 ppmv (dry basis)

^a All emission limits are corrected to 7% O₂.

^b Toxicity Equivalents - relating the relative concentrations and toxicity of the dioxin and furan congeners and isomers to the toxicity of 2,3,7,8 - tetrachlorodibenzodioxin.

^c For purposes of compliance, operation of a wet particulate control device is presumed to meet the 400°F or lower requirement

Compliance Demonstration Method:

Operation of incinerator as specified in Condition a of **1. Operating Limitations** above.

- b. Visible emissions shall not exceed 20% opacity on a 6-minute average basis, except as follows. [401 KAR 59:020, Section 3(1)]
 - i. The opacity standard does not apply during periods of startup and shutdown [401 KAR 50:055, Section 2(4)]

Compliance Demonstration Method:

Monthly visual observations as specified in **4. Specific Monitoring Requirements** and **5. Specific Record Keeping Requirements** below.

- c. Particulate emissions shall not exceed 0.23 g/dscm (0.1 gr/dscf), corrected to 12 percent carbon dioxide excluding the contribution of carbon dioxide from auxiliary fuel. [401 KAR 59:020, Section 3(2)(a)]

Compliance Demonstration Method:

Operation of incinerator as specified in Condition 1.a of **1. Operating Limitations** above.

3. Testing Requirements:

- a. The permittee shall comply with the applicable testing requirements in 40 CFR 63.1207.
- b. See **4. Specific Monitoring Requirements** below.

4. Specific Monitoring Requirements:

- a. The permittee shall comply with the applicable monitoring requirements in 40 CFR 63.1209.

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Incinerator Area**

- b. Quality assurance procedures for the monitoring systems shall be conducted in accordance with the Continuous Monitoring Performance Evaluation Plan required by 40 CFR 63.1209(b) and (d)(1).
- c. Waste shall be analyzed in accordance with the Feedstream Analysis Plan required by 40 CFR 63.1209(c)(2).
- d. The permittee shall perform qualitative monthly visual observations of the control device or stack. If visible emissions are observed, then:
 - i. The permittee shall correct the problem (as indicated by another visual observation showing no visible emissions), or
 - ii. The permittee shall perform an EPA Method 9 test.

5. Specific Record Keeping Requirements:

- a. The incinerator shall have a nameplate installed in a conspicuous place on the unit giving the manufacturer's name, model number, rated capacity, and the types of waste material for which the unit is designed. [401 KAR 59:020 Section 5]
- b. The permittee shall comply with the applicable record keeping requirements in 40 CFR 63.1211.
- c. Retain records of the results of the monthly visual observations. The records shall include the date of the observation, and whether any visible emissions were observed. If a visual observation was not performed, the reason for not performing it shall also be recorded.
If visible emissions are observed, then the following additional records shall be retained:
 - i. The actions taken to correct the problem, and result of the subsequent visual observation showing no visible emissions, or
 - ii. The results of the Reference Method 9 opacity test.

6. Specific Reporting Requirements:

The permittee shall comply with the applicable reporting requirements in 40 CFR 63.1211.

7. Specific Control Equipment Operating Conditions:

See Condition 1.a of **1. Operating Limitations** above.

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Incinerator Area**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
AU	01	Hazardous Waste Incinerator Area Fugitive Emissions Description: Fugitive emissions Commenced: Multiple Controls: Leak Detection and Repair per 40 CFR 264 Subpart BB

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

See **SECTION D, Source Emission Limitations and Testing Requirements** for source wide hydrogen chloride (HCl) and chlorine (Cl₂) limits.

NON-APPLICABLE REGULATIONS:

40 CFR 60, Subpart VV, Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry. The Incinerator process unit does not produce, as an intermediate or final product, a chemical listed in 60.489.

- Operating Limitations:**
See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.
- Emission Limitations:**
None
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
None
- Specific Record Keeping Requirements:**
None
- Specific Reporting Requirements:**
None
- Specific Control Equipment Operating Conditions:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Incinerator Area

8. **Alternate Operating Scenarios:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Remediation Area**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
100		UST Area Soil Bioventing System Description: Low vacuum soil venting unit Capacity: 100 acfm Maximum operation: 2,920 hr/yr Commenced: Re-commissioned 2005
	01	Soil Bioventing Controls: None
	02	Fugitive Emissions Controls: None

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

NON-APPLICABLE REGULATIONS:

40 CFR 63 Subpart GGGGG, National Emission Standards for Hazardous Air Pollutants: Site Remediation does not apply. 40 CFR 63.7881(b)(3) exempts site remediation performed under a RCRA corrective action conducted at a TSDF. The soil bioventing system was approved by the Kentucky Division for Waste Management and is being performed under the RCRA Corrective Action program.

- Operating Limitations:**
See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements.**
- Emission Limitations:**
None
- Testing Requirements:**
None
- Specific Monitoring Requirements:**
None
- Specific Record Keeping Requirements:**
None
- Specific Reporting Requirements:**
None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Remediation Area

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)**Remediation Area**

EMISSION POINT	PROCESS UNIT	NAME AND DESCRIPTION
101		General Remediation Soil Vapor Extraction System Description: Soil vapor extraction system Capacity: 200 lb/hr vapor extracted Commenced: 2002
	01	SVE System Venting to F-134a Thermal Oxidizer Controls: F-134a Thermal Oxidizer (EP Q5) Emissions are accounted for at the thermal oxidizer emission unit
	02	SVE System Fugitive Emissions Controls: None

APPLICABLE REGULATIONS:

401 KAR 63:020, Potentially Hazardous Matter or Toxic Substances.

NON-APPLICABLE REGULATIONS:

40 CFR 63 Subpart GGGGG, National Emission Standards for Hazardous Air Pollutants: Site Remediation does not apply. 40 CFR 63.7881(b)(3) exempts site remediation performed under a RCRA corrective action conducted at a TSDF. The SVE system was approved by the Kentucky Division for Waste Management and is being performed under the RCRA Corrective Action program.

The source has elected to accept limits in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD)

1. Operating Limitations:

- a. Remediation vapor streams shall be vented to the F-134a Thermal Oxidizer [To preclude the applicability of 401 KAR 51:017, PSD]

Compliance Demonstration Method:

Records of events when the remediation vapor streams are not vented to the thermal oxidizer, as specified in **5. Specific Record Keeping Requirements** below.

- b. See Condition 3 of **SECTION D, Source Emission Limitations and Testing Requirements**.

2. Emission Limitations:

None

SECTION B – EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

Remediation Area

3. Testing Requirements:

None

4. Specific Monitoring Requirements:

None

5. Specific Record Keeping Requirements:

- a. Retain records for each day indicating whether the SVE vapor streams were vented to the F-134a thermal oxidizer.
- b. For each event when the SVE vapor stream was not vented to the thermal oxidizer, record the date, time, and duration of the event, the nature of the event, and the results of any corrective actions taken.

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

None

8. Alternate Operating Scenarios:

None

SECTION C – INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

Boiler Area

Equip ID	Description	Capacity	Date Commen- ced	Generally Applicable Regulation
	No. 2 Fuel Oil Tank	30,000 gallons	2003	None – exempt from NSPS Kb per 40 CFR 63.110b(b) since tvp < 15.0 kpa (2.2 psia)
--	Diesel storage tanks	250 gal each (approx)	Multiple	None
GEN-101	Emergency generator (diesel internal combustion engine)	150 kW (approx 200 hp)	1975	None – Per 63.6590(a), 40 CFR 63 Subpart ZZZZ does not apply to RICE rated at less than or equal to 500 brake horsepower.
--	Brine tanks	--	--	None
--	Water treatment systems	--	--	None
--	Sodium hydroxide receiving, storage and handling	--	--	None

Monomer Plant:

Equip ID	Description	Capacity	Date Commen- ced	Generally Applicable Regulation
--	Monomer cooling tower	5,000 gal/min	2001	401 KAR 63:010
--	F-142b pressurized storage tank(s)	--	--	None
--	Monomer distillation column	--	2001	None
V-216	Monomer recycle column	--	1970	None
--	Monomer storage tanks	--	--	None
--	Monomer plant sodium hydroxide receiving, storage, and handling	--	--	None
--	Monomer loading / pullback to tube trailers	--	Various	None

SECTION C – INSIGNIFICANT ACTIVITIES (CONTINUED)**Monomer Plant:**

--	Monomer cracking furnace heater (natural gas, direct-fired)	9.5 mmBtu/hr	1998	40 CFR 63 Subpart DDDDD-Per 40 CFR 63.7506(c)(3), units in the existing small gaseous fuel subcategory are not subject to any requirements in 40 CFR 63 Subparts A or DDDDD. 401 KAR 59:015 does not apply because heater is not an “indirect heat exchanger” (heater does not use a heat transfer medium to transfer energy to its point of use)
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Polymer Plant:

Equip ID	Description	Capacity	Date Commen- ced	Generally Applicable Regulation
V-303A/B/C/D/E	Polymer Reactors Recipe Vents (purging of non-condensibles to atmosphere)	--	1996 - 2006	None
V-303A/B/C/D/E	Polymer Reactor Aborts (malfunction venting to atmosphere)	--	1996 - 2006	None
V-01	Monomer Day Tank – pressure vessel	6,000 gal storage capacity	1964	None
--	Feed Propane Cylinders – pressure vessels	Various	Various	None
--	Wax Addition Pot – negligible PM emissions	--	1997	401 KAR 63:010
SEPR-314	Surfactant Weighing and Charging to Charge Pot with Dust Collector – negligible PM emissions	--	1997	401 KAR 59:010
I-V-2000	Surfactant Makeup Tank – negligible volatility	60 gal storage capacity	1997	None
V-1650	Surfactant Makeup Tank – negligible volatility	120 gal storage capacity	--	None
V-407	IPA (isopropyl alcohol) Makeup Tank	800 gal storage capacity	1973	None
V-1609	Initiator Storage Tank – pressure vessel	14,000 gal storage capacity	1991	None

SECTION C – INSIGNIFICANT ACTIVITIES (CONTINUED)**Polymer Plant:**

Equip ID	Description	Capacity	Date Commen- ced	Generally Applicable Regulation
V-607	F-11 Makeup Tank – pressure vessel	3,081 gal storage capacity	1965	None
V-1305	Initiator Makeup Tank	200 gal storage capacity	1991	None
V-551	Initiator Mix Tank	150 gal storage capacity	2001	None
V-552	Initiator Pump Tank	375 gal storage capacity	1982	None
TK-03	Pluronic Mix Tank – negligible volatility	330 gal storage capacity	1970	None
V-1103	Ethyl Acetate Makeup Tank	600 gal storage capacity	1998	None
--	NaOH Storage for Water Deionizers	--	--	None
--	Scale Hood with Bag Filter (first floor)	--	--	401 KAR 61:020
--	Kynar Lab	--	--	None
SEPR-0324A/B	Kynar Central Vacuum System	2,000 lb/week (average)	2002	401 KAR 59:010
V-315B	Propylene Glycol Tank – negligible volatility	5,600 gal storage capacity	1969	None
--	Emergency backup cooling tower for Kynar air compressor	--	1999	401 KAR 63:010
V-401	Propylene Glycol Tank – negligible volatility	600 gal storage capacity	1973	None
V-572A/B/C	Knockout Pots for Polymer Reactors – closed system	--	1982/1982/ 2005	None
C-551	East Coagulator - does not vent	--	1999	None
C-552 A/B	East Wash Columns - do not vent	--	1969/2005	None
V-555	Eat Thickener – does not vent	--	1969	None
SEPR-5260A	Small Alternate Thickener and Agitated Polymer Tank – does not vent	--	2005	None
SEPR-5260B	Large Alternate Thickener – does not vent	--	2006	None
C-1551	East Coagulator - does not vent	--	1991	None
C-1552	East Wash Columns - do not vent	--	1991	None
V-1555	Eat Thickener – does not vent	--	1991	None
SEPR-02A-D	Latex Centrifuges (four) – do not vent	--	1967	None
--	Tote Filling from Rotary Dryer – PM vented indoors – trivial PM emissions	350 lb/hr	1967	401 KAR 63:010
V-15	Little Nauta Blender – vents indoors – trivial PM emissions	3,000 lb/hr	1964	401 KAR 63:010

SECTION C – INSIGNIFICANT ACTIVITIES (CONTINUED)**Polymer Plant:**

Equip ID	Description	Capacity	Date Commen- ced	Generally Applicable Regulation
MATL-0338A	Little Nauta Tote Dump Station - vents indoors – trivial PM emissions	3,600 lb/hr	1964	401 KAR 63:010
--	Tote Filling from West Nauta Blender - vents indoors – trivial PM emissions	7,500 lb/hr	1970	401 KAR 63:010
--	Sifter Tote Dump Station -vents indoors – trivial PM emissions	3,600 lb/hr	1970	401 KAR 63:010
TK-201A	Sifter Feed Hopper – does not vent	--	1970	None
SEPR-201C	Sifter – does not vent	--	1989	None
Z-3680	Optical Pellet Scanner - vents indoors – trivial PM emissions	--	2004	401 KAR 63:010

K-97 Plant/F-140s Process:

Equip ID	Description	Capacity	Date Commen- ced	Generally Applicable Regulation
V-102	K-97 HF feed tank (Pressure vessel)	10,000 gal		None
R-102	K-97 reactor (Does not vent)	--	1991	None
M-204	K-97 phase separator (Vented to K-97 drowning tower for maintenance clearing approx. once/yr)	--	1985	None
V-301B	K-97 crude tank (Does not vent)		1991	None
T-303	K-97 F-142b product column (Vented to K-97 drowning tower for maintenance clearing approx. once/yr)		1991	None
M-201/2/3	K-97 HCl alumina beds (Vented to K-97 drowning tower for maintenance clearing approx. once/yr)		1981	None
V-305A, 305B	K-97 product day tanks (two) (Pressure vessels)			None
	K-97 reactor stripper (does not vent)		1991	None
TK-201A, TK-201B	Two K-97 HCl Shift Tanks	13,500 gal each	1995	None

SECTION C – INSIGNIFICANT ACTIVITIES (CONTINUED)**K-98 Plant:**

Equip ID	Description	Capacity	Date Commen- ced	Generally Applicable Regulation
OV-8001	AHF emergency blowdown tank	50,000 gal	1996	None
--	AHF emergency loading	--	1996	None
--	AHF tank farm area fugitive emissions	--	1996	None
--	AHF tank farm potassium hydroxide receiving, storage, and handling	--	1996	None
--	AHF tank farm sodium hydroxide receiving, storage, and handling	--	1996	None
C-8013, C-8014	AHF tank farm vent condenser refrigeration package unit	--	--	None
O-Z-8001	AHF tank farm water softener package unit	--	--	None
--	AHF tank farm soft water storage tank	--	--	None
#5 and #6 Bins	Former AHF plant - two spar bins - out of service	--	--	None
#6 Tank	Former AHF plant - #6 sulfuric acid tank - out of service	--	--	None
--	Former AHF plant - HF production scrubber - out of service	--	--	None
HF25, HF26	Former AHF plant - fuel oil storage tanks (backup fuel for former HF kilns) - out of service	--	--	None
V-101	K-98 HF feed tank - pressure vessel	10,000 gal	--	None
R-101A R-102	K-98 reactors – do not vent	--	1988 2005	None
M-104	K-98 phase separator - vented to K-98 drowning tower for maintenance clearing	--	Modified 2005	None
V-105	K-98 crude tank - malfunction venting only to K-98 drowning tower X-114	--	1982	None

SECTION C – INSIGNIFICANT ACTIVITIES (CONTINUED)**K-98 Plant:**

Equip ID	Description	Capacity	Date Commen- ced	Generally Applicable Regulation
T-201	K-98 F-142b product column - vented to K-98 drowning tower for maintenance clearing	--	Modified 2005	None
M-107/8/9	K-98 HCl alumina beds - vented to K-98 drowning tower for maintenance clearing	--	1982	None
--	K-98 HCl shift tanks -pressure vessels	--	2005	None
--	Foranes cooling tower	15,000 gal/min	--	401 KAR 63:010
--	K-98 Forane product tanks - pressure vessels	--	Various	None
--	Butylene oxide tank - pressure vessel	--	--	None

F-134a Plant:

Equip ID	Description	Capacity	Date Commen- ced	Generally Applicable Regulation
T-2309	Lights column vent to atmosphere upon F-134a thermal oxidizer waste feed shutoff (malfunction emissions)	--	1995	None
V-2308/09	F-134a crude drums (two) non-condensables vented to F-134a Thermal Oxidizer or Hazardous Waste Incinerator	--	1995	None
T-2315A/B	F-1122 removal sieves regeneration vent to atmosphere upon F-134a thermal oxidizer waste feed shutoff (malfunction emissions)	--	1995	None
V-6207	F-134a gas phase HCl absorber pump tank vented to F-134a Vent Scrubber	--	1995	None
V-2122	TCE day tank relief valve vent to atmosphere	3,231 gal	1995	None
--	Heated room vented to F-134a Vent Scrubber	--	1995	None
V-2105	F-134a antimony pentachloride feed tank vented to F-134a Vent Scrubber	550 gal	1995	None
TK-4601	F-134a diesel tank	640 gal	1995	None

SECTION C – INSIGNIFICANT ACTIVITIES (CONTINUED)**F-134a Plant:**

Equip ID	Description	Capacity	Date Commenced	Generally Applicable Regulation
T-3101	F-134a cooling tower	18,000 gpm recirculation	1995	401 KAR 63:010
V-6702	Waste organic tank vented to F-134a Thermal Oxidizer, Hazardous Waste Incinerator, or to process	--	1995	None
FAN-6207	BOA hose and fan system to capture fugitives from opening lines during maintenance activities - vented to fugitive emission scrubber	--	1995	None
TK-6202	F-134a vent scrubber circulation tank	20,306 gal	1995	None
TK-6901A/B	F-134a caustic waste storage tanks (two)	9,400 gal each	1995	None
TK-6301/02	F-134a caustic/sulfite blend and sodium hydrogen sulfite receiving, storage, and handling	20,303 gal each	1995	None

K-97 Plant / F-32 Process:

Equip ID	Description		Capacity	Date Commenced	Generally Applicable Regulation
--	F-30 unloading from truck, rail, or barge	Hose disconnect losses	NA	2005	None
--	F-30 tank(s)	Pressure vessels with no emissions	NA	2005	None
--	F-32 product storage tank(s)	F-32 is not a regulated air pollutant	NA	2005	None
--	F-32 product loading, blending, and packaging	F-32 is not a regulated air pollutant	NA	2005	None
--	F-32 product dryers	F-32 is not a regulated air pollutant	NA	2005	None
--	Caustic/Sulfite blend receiving, storage, and handling	Caustic is not a regulated air pollutant	NA	2005	None

SECTION C – INSIGNIFICANT ACTIVITIES (CONTINUED)**K-97 Plant / F-32 Process:**

Equip ID	Description		Capacity	Date Commenced	Generally Applicable Regulation
	Product dryer (alumina) changeouts	Fugitive dust emissions	NA	2005	401 KAR 63:010
	Carbon change outs	Fugitive dust emissions	NA	2005	401 KAR 63:010

Logistics, Packaging, and Loading:

Equip ID	Description	Capacity	Date Commenced	Generally Applicable Regulation
--	HCl loading hose disconnect losses	--	--	None
--	Methyl Chloroform /TCE barge dock (unloading)	--	--	None
--	Water treatment chemical tanks	--	--	None
--	Minor additives blending	--	--	None
--	Gasoline storage tanks - general use (capacity < 10,000 gal each)	< 10,000 gal each	--	None
--	Diesel storage tanks - general use (capacity < 10,000 gal each)	< 10,000 gal each	--	None
--	Fuel oil storage tanks - general use (capacity < 10,000 gal each)	< 10,000 gal each	--	None
--	Engine oil storage tanks - general use (capacity < 10,000 gal each)	< 10,000 gal each	--	None
--	Ethylene glycol storage tanks (capacities < 10,000 gal each)	< 10,000 gal each	--	None
--	Refrigerant gas pressurized storage tanks	--	--	None
--	Forane / refrigerant gases unloading from railcars and tank trucks	--	--	None

SECTION C – INSIGNIFICANT ACTIVITIES (CONTINUED)**Logistics, Packaging, and Loading:**

Equip ID	Description	Capacity	Date Commen- ced	Generally Applicable Regulation
--	Refrigerant dryers dessicant change outs (existing)	--	--	None
--	Cylinder labeling	--	--	None
--	Cylinder oil reclaim	--	--	None
--	Combustion of off-spec R-22 in F-134a Thermal Oxidizer	--	2005	None
--	Emergency generators (diesel internal combustion engines) < 475 kW (635 hp) power output each	< 475 kW (635 hp) power output each	--	40 CFR 63 Subpart ZZZZ - Per to 40 CFR 63.6590(b)(3), existing emergency stationary RICE are not subject to the requirements of 40 CFR 63 Subpart ZZZZ and 40 CFR 63 Subpart A, and no initial notification is necessary.

Incinerator Area:

Equip ID	Description	Capacity	Date Commen- ced	Generally Applicable Regulation
L-V-0119	Waste Hold Tank (pressure tank)	22,843 gallons	1982	None
L-V-0119A	Waste Hold Tank (pressure tank)	22,850 gallons	1991	None
L-V-0121	Waste Hold Tank (pressure tank)	6,266 gallons	1982	None
L-V-0229	Waste Hold Tank (pressure tank)	6,000 gallons	1989	None
N-V-6103	Waste Hold Tank (pressure tank)	23,688 gallons	1996	None
--	Waste loading to tank trucks (pressurized system)	--	1994 (est)	None

SECTION C – INSIGNIFICANT ACTIVITIES (CONTINUED)

General Insignificant Activities:

Equip ID	Description	Capacity	Date Commenced	Generally Applicable Regulation
--	Laboratory Facilities	NA	--	None

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.
2. VOC, PM₁₀, SO₂, CO, NO_x, and ODS emissions as measured by methods referenced in 401 KAR 50:015, Section 1 or any method approved by the Division, shall not exceed the respective limitations specified herein.

SOURCE WIDE:

3. Pursuant to 401 KAR 63:020, Section 2(1), no permittee shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants (applies to HF and Methyl Chloroform and pollutant emissions that are not regulated by 401 KAR 63:021).

Compliance Demonstration Method:

The source is in compliance with 401 KAR 63:020 based on the emission rates of toxics given in the application submitted by the source. If the source alters process rates, material formulations, or any other factor that would result in an increase of toxic emissions to what was specified in the application or the addition of toxic emissions not previously evaluated by the Division, the source shall submit the appropriate application forms pursuant to 401 KAR 52:020, Section 3(1)(a), along with modeling or other evaluation to show that the facility will remain in compliance with 401 KAR 63:020.

STATE-ORIGIN REQUIREMENTS:

4. a. Pursuant to 401 KAR 63:021, Section 1, a source in existence on January 19, 1999 which was issued a permit pursuant to 401 KAR 50:035 with conditions based on 401 KAR 63:021 or 401 KAR 63:022 shall continue to comply with all conditions based on 401 KAR 63:021 or 401 KAR 63:022 unless it can demonstrate that a condition is no longer necessary to protect human health and the environment.

Pursuant to Permit F-00-021, Section D, Condition 3, the source-wide emission rate of the following pollutants shall not be exceeded:

Pollutant	Emission Rate
Chlorine	69.20 lb/hr (8-hr average)
Calcium oxide	0.51 lb/hr (8-hr average)
Hydrogen chloride	29.70 lb/hr (1-hr average)
Sodium hydroxide	16.51 lb/hr (1-hr average)

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

Pollutant	Emission Rate
Trichloroethylene	510.99 lb/hr (8-hr average)
Antimony	2.68 lb/hr (8-hr average)
Potassium hydroxide	2.76 lb/hr (1-hr average)
Sulfuric acid	2.08 lb/hr (8-hr average)

Compliance Demonstration Method:

Compliance with the source-wide emission limits shall be demonstrated by initial calculations of maximum controlled source-wide emission rates. Any time an affected facility is not vented through its control device (listed in Section B), calculations shall be updated. Calculations shall also be updated upon application for permit renewal. For those pollutants with no emission sources in service, calculations are not required until equipment is re-started.

- b. Retain calculations of maximum controlled source-wide emission rates of the pollutants listed under Emission Limitations above.
- c. Retain maintenance records for all air pollution control equipment controlling emissions of the pollutants listed under Emission Limitations above.

F-134a PLANT:

- 5. a. Total annual emissions from the emission points listed in Table 1 shall not exceed the emission rates listed in Table 2, based on a rolling 12-month total. [To preclude applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD)]

Table 1
F-134a Plant Construction Emission Points

Emission Point ID	Description
P1	F-134a wastewater
Q1	F-134a crude gas dryers (two)
Q3	F-134a primary and secondary gas phase reactor superheaters
Q4	Boiler #4
Q5	F-134a thermal oxidizer system
Q6	F-134a lights column
Q7	TCE storage tanks (two)
Q9	F-1122 removal sieves
R1	F-134a gas phase HCl absorber and tails tower
S6	F-134a emergency generator (diesel)
T2	F-134a plant fugitive equipment leaks
U3	F-134a waste acid clearing system and alt. evacuation system

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

Emission Point ID	Description
V1	F-134a product column
U10	F-134a catalyst charging
--	F-134a cooling tower

Table 2
F-134a Plant Construction Group Emission Limits

Pollutant	Emission Limit (rolling 12-month total)
PM ₁₀	13.5 tons
SO ₂	36 tons
NO _x	36 tons
CO	90 tons
VOC	36 tons

Compliance Demonstration Method:

Compliance shall be determined by recording monthly process rates and performing quarterly calculations of monthly emission rates and rolling 12-month total emissions.

Note: Emissions of affected facilities that are controlled by the F-134a Thermal Oxidizer or Hazardous Waste Incinerator are included in the Thermal Oxidizer or Incinerator Waste Feed stream emission calculation and are not calculated at each of the affected facilities.

- b. The permittee shall maintain records of the monthly process rates for each emission point listed in Table 1 above, except for emissions that are vented to the F-134a Thermal Oxidizer or Hazardous Waste Incinerator. In place of records of actual process rates, the permittee may use potential (worst-case) process rates. [To preclude the applicability of 401 KAR 51:017, PSD]
- c. The permittee shall retain quarterly calculations of monthly emissions and total emissions for the previous 12-month period for the emission points listed in Table 1 above. [To preclude the applicability of 401 KAR 51:017, PSD]

K-97 PLANT / F-140s PROCESS:

6. a. The K-97 Plant/F-140s Process shall cease operation before startup of the new K-97 Plant/F-32 Process. [To preclude the applicability of 401 KAR 51:017, PSD]

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

- b. The permittee shall report the K-97 Plant/F-140s Process shutdown to the Division. The letter must be submitted no later than 30 days after the shutdown.
- c. The permittee shall retain a copy of the letter to the Division reporting the K-97 Plant/F-140s Process shutdown.

K-97 PLANT / F-140s PROCESS and K-98 PLANT:

- 7. The source has elected to accept an annual limit on methyl chloroform use in order to preclude the applicability of 401 KAR 51:017, Prevention of Significant Deterioration of Air Quality (PSD), for ozone depleting substances (ODS).
 - a. Total combined methyl chloroform raw material usage in the K-97/F-140s and K-98 process units shall not exceed 14 million gallons in any consecutive 12-month period. [To preclude the applicability of 401 KAR 51:017, PSD, for ODS]
 - b. The permittee shall record the amount of methyl chloroform raw material used each month.
 - c. The permittee shall calculate and retain records of the total methyl chloroform raw material usage for the previous 12-month period.

K-97 PLANT / F-32 PROCESS:

- 8. The F-32 process unit will not be subject to 40 CFR 63 Subparts F, G, or H. Neither the product of the F-32/HCl process unit (refrigerant F-32, difluoromethane, CAS 75-10-5), nor the co-product (hydrochloric acid) is listed in Table 1 of 40 CFR 63 Subpart F. Therefore, the R-32/HCl process unit will not produce as a primary product a chemical listed in Table 1 of the HON.

The following equipment is part of the 40 CFR 63 Subpart FFFF MON Chemical Process Unit, and is therefore exempt from 40 CFR 63 Subpart EEEE (Organic Liquid Distribution MACT) as specified in 40 CFR 63.2338 (c)(1):

- F-30 Unloading from Barge, Rail, or Truck
 - F-30 Storage Tanks
- 9. Pursuant to Permit VF-05-002, at least 120 days prior to startup of the F-32 production unit, the permittee shall submit to the Division the results of source-wide dispersion modeling of HF emissions.

SECTION D – SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS (CONTINUED)

POLYMER PLANT:

10. Total combined dry polymer processed through emission points PLA through PLG shall not exceed 29 million lbs for any consecutive 12-month period. [To preclude the applicability of 401 KAR 51:017, PSD, for PM]

Compliance Demonstration:

Monthly records of the total dry polymer processed each month, and the total for the previous 12-month period.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

1. Pursuant to Section 1b (IV)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
 - a. Date, place as defined in this permit, and time of sampling or measurements;
 - b. Analyses performance dates;
 - c. Company or entity that performed analyses;
 - d. Analytical techniques or methods used;
 - e. Analyses results; and
 - f. Operating conditions during time of sampling or measurement.
2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
 - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
 - b. To access and copy any records required by the permit;
 - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.
4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

unit was not in operation [Section 1b (V)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. All deviations from permit requirements shall be clearly identified in the reports.
7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
 - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
 - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by Section F.6 [Section 1b (V) 3, 4. of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
 - a. Identification of the term or condition;
 - b. Compliance status of each term or condition of the permit;
 - c. Whether compliance was continuous or intermittent;
 - d. The method used for determining the compliance status for the source, currently and over the reporting period.
 - e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

- f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality
Paducah Regional Office
130 Eagle Nest Drive
Paducah, KY 42003-9435

U.S. EPA Region 4
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.
11. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

SECTION G - GENERAL PROVISIONS

(a) General Compliance Requirements

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].
2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
3. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
 - a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
 - b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
 - c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

4. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION G - GENERAL PROVISIONS (CONTINUED)

5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].
6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
8. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].
11. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Environmental and Public Protection or any other federal, state, or local agency.
13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].

SECTION G - GENERAL PROVISIONS (CONTINUED)

14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].
15. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.
16. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:
 - a. Applicable requirements that are included and specifically identified in the permit and
 - b. Non-applicable requirements expressly identified in this permit.
17. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

(b) Permit Expiration and Reapplication Requirements

1. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].
2. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

(c) Permit Revisions

SECTION G - GENERAL PROVISIONS (CONTINUED)

1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).
 2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.
- (d) Construction, Start-Up, and Initial Compliance Demonstration Requirements
Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the construction of the equipment described herein, Reactor V-303E (EP 58), Latex Screener SEPR-1500B (EP GR1), Screened Latex Pump Tanks V-1500C (EP GR1) in accordance with the terms and conditions of this permit.
1. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.
 2. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
 - a. The date when construction commenced.
 - b. The date of start-up of the affected facilities listed in this permit.
 - c. The date when the maximum production rate specified in the permit application was achieved.
 3. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.
 5. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration test on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. These performance tests must also be conducted in accordance with General Provisions G(d)7 of this permit and the permittee must furnish to the Division for Air Quality's Frankfort Central Office a written report of the results of such performance test.
 6. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.
 7. Pursuant to 401 KAR 50:045 Section 5 in order to demonstrate that a source is capable of complying with a standard at all times, a performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirement on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.
- (e) Acid Rain Program Requirements
1. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

SECTION G - GENERAL PROVISIONS (CONTINUED)

(f) Emergency Provisions

1. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
 - a. An emergency occurred and the permittee can identify the cause of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
 - d. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
 - e. This requirement does not relieve the source of other local, state or federal notification requirements.
2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].
3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

(g) Risk Management Provisions

1. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

RMP Reporting Center
P.O. Box 1515
Lanham-Seabrook, MD 20703-1515.

2. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION G - GENERAL PROVISIONS (CONTINUED)

(h) Ozone depleting substances

1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
 - c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
 - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
 - e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
 - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION H – ALTERNATE OPERATING SCENARIOS

None

SECTION I – COMPLIANCE SCHEDULE

None